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SIXTH ANNUAL REPORT

OF

THE DEPARTMENT OF
AGRICULTURE



July 1, 1922

TO

June 30, 1923

B. M. DAVISON, Director

[Reprinted from the Sixth Administrative Report. Printed by
authority of the State of Illinois.]

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STATE OF ILLINOIS.
THE DEPARTMENT OF AGRICULTURE.

B. M. DAVISON, *Director*, Springfield.

DIVISIONS.

Animal Industry and Veterinary Science.....	Springfield
JOHN JUNEMAN, <i>Superintendent</i> .	
DR. F. A. LAIRD, <i>Chief Veterinarian</i> .	
Dairy Extension	Springfield
S. J. STANARD, <i>Superintendent</i> .	
Foods and Dairies.....	Kimball Building, Chicago
ALFRED H. JONES, <i>Superintendent</i> .	
Game and Fish.....	Springfield
WILLIAM J. STRATTON, <i>Chief Warden</i> .	
Apiary Inspection	Putnam
A. L. KILDOW, <i>Chief Inspector</i> .	
Plant Industry	Urbana
O. T. OLSEN, <i>Superintendent</i> .	
P. A. GLENN, <i>Chief Inspector</i> .	
Seed Inspection	Springfield
ALBERT C. WILSON, <i>Chief Seed Analyst</i> .	
State Fair	Springfield
W. W. LINDLEY, <i>General Manager</i> .	
Poultry Husbandry	Springfield
C. P. SCOTT, <i>Chief Poultryman</i> .	
Agricultural Statistics	Springfield
A. J. SURRATT, <i>U. S. Field Agent</i> , in charge.	

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THE DEPARTMENT OF AGRICULTURE.

B. M. DAVISON, *Director.*

We stand on the bank of a wide river. You see the river today, tomorrow you see that same river again, but not the same water. It flows on and so flows the stream of time. In itself it is endless, never beginning, never can end. But for us it is short, only a moment. It moves slowly in childhood. A day seems a year. It moves swiftly in old age. Years are like weeks and soon they are gone.

The activities of the State Department of Agriculture are and will be somewhat curtailed during the present biennium by a shrinkage in the funds available coincident with the rising scale of costs of operations. Appropriations were reduced, in fact, one division was entirely discontinued.

Commissioner Koiner of Virginia once said, "The great head waters of industry are involved in agriculture. Farmers are the largest buyers and shippers over the transportation lines. They furnish 86 per cent of the raw materials for the great manufacturing industries of the Nation. They take out of the earth each year many billions of dollars in new wealth and this new wealth finally circulates through every channel of trade. Thus, agriculture not only supplies the food of the people, it supplies the streams that nourish every department of business life. Agriculture is the nutrition of living and trading."

In the light of all this, what is the condition, the financial status of agriculture in the world today? Since our last report made a year ago, farmers have continued to suffer from falling prices of crops. What do we find in the business world today? We find every business organized to the limit except the farmer's. The farmer has devoted all his time and energy through past years to production. In marketing he has been as helpless as a rudderless ship on a stormy sea. Today our farmers are at the forks of a great road. One road leads to continued neglect of markets, over-production, one farmer competing with another, depletion of the soil, increased taxes and the exodus of the young man tired of the soil with no surplus on the balance sheet. The other fork of the road will lead to taking an active interest in the business side of farming, the adoption of SYSTEM in production and marketing of products of the farm in all its branches.

Agriculture in America is unique. There is no other agriculture in the world just like it is here today. It embraces a greater variety of soil, marketable crops and live stock than can be found in any other country and its mediums of transportation reach all the markets of the entire world. Notwithstanding these facts and these unique advantages, the farmer is losing money. The unequal and unbalanced values between

agriculture and all other industries have grown so great that a rapid reduction in the products of the farm to balance the consumption is inevitable. Some of the great business minds of our country are apprehensive of impending financial trouble. Some have given the expression to the effect that other interests than agriculture should lend a helping hand to restore a righteous equilibrium in the business world.

Marketing is the difficult and all important farm problem of the day. Fifty years ago the farmers of Denmark were on the verge of a financial chaos. Those farmers were then, as our farmers are now, without organization or system in marketing farm products. The Danish farmers saw the impending crash and they decided a change must be made. With Spartan determinations, they did work a mighty change in their entire farming and marketing operations and today 90 per cent of the farm products in Denmark are marketed through associations at a fair profit to the producer. The Danes have wisely studied their most available markets and have adopted both crop and live stock products to fit these markets. The Danish farmer as a whole is the most prosperous farmer in the world. They have learned that production is one form of science and that marketing is another. They have made themselves familiar with both forms.

However, I might add that day light is breaking in America. The farmers on the Pacific slope have adopted the Danish plan of commodity cooperative marketing and have proved the practicability of the plan for all American farmers. Various states, including our own Illinois, are now in the initiative in this work, in the marketing of live stock, horticulture, wheat, corn, tobacco and cotton. The promotion and perfection of this department in the farmer's business life requires time and constant effort.

The last Legislature added a new division to this department known as the Division of Standardization and Markets, which has been in operation less than one year and is making remarkable strides. The appropriation for this division for the first biennium was very low and it is to be hoped that ample provision will be made for the proper functioning of this new division by the next Legislature. I am looking forward to the end that this division will be one of the most important of the department.

The laws under which the State Department of Agriculture is operating are largely regulatory and as Dr. Walter Campbell said, "In the determination of the policy for the administration of regulatory laws, it is absolutely essential that two things be understood—first, the pertinence of the law and, second, the fact that all Federal laws are supplements to existing State legislation."

Regulatory laws themselves are quite different from ordinary statutes of a criminal kind. The regulatory laws with which the United States Department of Agriculture has to deal are corrective measures more than penal statutes and proper consideration in their interpretation is essential if the laws are to be administered in the most effective way. Our statute books now are teeming with criminal laws, laws that have been legitimately qualified laws, that were the first of the enactments of our legislative bodies in the guarantee of those funda-

mental rights such as life and liberty. In the interpretation of them, strict consideration has been applied and the judiciary for its own purposes makes application of a very strict interpretation, but being criminal laws they interpret them specifically. There is quite a difference between the laws that were designed and passed and must be enforced as guarantees of such fundamental rights as life and liberty and laws which have for their purpose the correction of certain commercial conditions. Later on our law making bodies began to concern themselves not so much about the guarantees of rights but the passing of legislation which had for its purpose more guarantee of those things which insure the pursuit of improved habits. It has been only within recent times that most of the regulatory laws with which our State officials have to deal were passed. These laws, however, are of a specialized kind. In the determination of a policy for the enforcement of these regulatory or corrective statutes it must be borne in mind that that policy must be susceptible to modification. No plan that can be outlined as a satisfactory scheme of administration in the beginning, will be found to be satisfactory after a lapse of a period of time. We know very well that the conditions with which the administering official is confronted very shortly after the passage of the law, are quite different from the conditions with which he would be confronted five, ten or fifteen years after the passage of the act.

Different manufacturers of this country have found themselves engaged in outlawed practices which had become illegal over night, as a result of following a custom which had engraved itself on the food manufacturing industry and which had prevailed out of competition or for many other reasons which made it necessary for the food manufacturers to develop some technique which would permit them to improve their product. I can illustrate this point by reference to the use of preservatives prior to the passage of our present food and dairy act.

I am of the opinion that the most effective service that can be rendered by a regulatory office is to impress upon those concerned by the passage of the law, the provisions of the act. In that way you have impressed on the minds of probably 90 per cent of the industry concerned, the provisions of the act, who will endeavor to conform with the same. However, we are not so much concerned with this 90 per cent as we are with the certain small per cent that undertake to operate just as close as possible without violation.

In conclusion, this great agricultural nation must not slack. There must be established a comity and equity in trade relations between all industries that will give hope and confidence to the future.

All agencies in the service of this department should stress to their utmost endeavor, two important lines of work at the present time:

First, the reduction of acreage and the increase in yield per acre so as to reduce the cost of production to a minimum. There is some profit to the farmer who produces sixty bushels of corn per acre on thirty acres rather than to produce thirty bushels per acre on sixty acres.

Second, every possible effort should be made to encourage every farmer to interest himself personally in the great effort to form commodity cooperative associations that will embrace the marketing in an

orderly way of all the products of the farm. If farmers will follow the example practiced by every other industry, agriculture will soon thrive and grow in prosperity as do those industries which we see flourishing all over the country. We believe the terrible stress existing today will cause farmers to see as never before, the absolute necessity for united action on their own part.

We believe success will crown such efforts and that agriculture, the old and ancient and honorable industry, will again flourish as the proverbial green tree growing beside the still waters. Then will her people be contented and the nation grow greater and greater as the years roll on.

DIVISION OF ANIMAL INDUSTRY.

JOHN JUNEMAN, Superintendent.

The following is a brief report of the activities of the Division of Animal Industry for the fiscal year ending June 30, 1923:

Offices are maintained at the Union Stock Yards, Chicago, National Stock Yards, East St. Louis, and at the Union Stock Yards, Peoria. The office at each of these yards is in charge of a competent veterinarian who enforces the rules and regulations regarding stock entering and leaving the yards. Our system of inspection at the present time is about as nearly perfect as it can be made but we are always working with a view to making improvements that we find will be beneficial to the shipper.

The following table shows the shipments and disposition of feeder cattle from public stock yards as shown by owners report to the division July 1, 1922 to June 30, 1923:

Yards.	Number shipped.	Slaughtered.	Tested.	Passed.	Reactors.	Sold in quarter.	Died.	Castrated.	Number of shipments.
Union.....	37,521	13,195	6,166	6,002	164	711	141	665	2,156
National.....	59,188	26,279	838	838	-----	1,708	46	453	2,717
Kansas City.....	34,156	12,324	687	681	6	2,332	56	233	755
South Omaha.....	28	3	14	13	1	-----	-----	-----	1
South St. Paul.....	15,251	4,548	824	820	4	1,315	51	482	550
Miscellaneous.....	2,863	478	386	386	-----	29	1	1	156
Peoria.....	1,449	273	20	20	-----	47	7	11	208
Indianapolis.....	160	73	-----	-----	-----	-----	-----	18	5
Sioux City.....	233	139	-----	-----	-----	-----	-----	-----	7
South St. Joe.....	191	54	-----	-----	-----	-----	-----	-----	7
Total.....	156,040	57,366	8,935	8,760	175	6,142	302	1,863	6,562

During the first six months of the fiscal year, the following shipments of hogs were made into this State:

UNION STOCK YARDS.

Number shipped	123
Died	7
Number healthy	116
Loss 5.6 per cent.	

NATIONAL STOCK YARDS.

Number shipped	4,357
Died	155
Number healthy	4,202
Loss 3.5 per cent.	

KANSAS CITY STOCK YARDS.

Number shipped	14,379
Died	733
Overheat	1
In Transit	15
	<hr/>
	759
Number healthy	13,620
Loss 5 per cent.	

SOUTH ST. PAUL STOCK YARDS.

Number shipped	5,362
Died	66
	<hr/>
Number healthy	5,296
Loss 1 per cent.	

PEORIA STOCK YARDS.

Number shipped	1,424
Died	32
	<hr/>
Number healthy	1,392
Loss 2 per cent.	

WICHITA, KANSAS STOCK YARDS.

Number shipped	1,027
Died	29
	<hr/>
Number healthy	998
Loss 2.8 per cent.	

EVANSVILLE, INDIANA STOCK YARDS.

Number shipped	10
	<hr/>
Number healthy	10

INDIANAPOLIS STOCK YARDS.

Number shipped	116
	<hr/>
Number healthy	116

During the last six months of the fiscal year, the following shipments were made:

UNION STOCK YARDS.

Number shipped	369
	<hr/>
Number healthy	369

NATIONAL STOCK YARDS.

Number shipped	11,953
Died	626
	<hr/>
Number healthy	11,327
Loss 5 per cent.	

SOUTH ST. PAUL STOCK YARDS.

Number shipped	6,058
Died	626
	<hr/>
Number healthy	5,972
Loss 10 per cent.	

KANSAS CITY STOCK YARDS.

Number shipped	20,113
Died	1,209
	<hr/>
Number healthy	18,904
Loss 6 per cent.	

PEORIA STOCK YARDS.

Number shipped	2,415
Died	47
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Number healthy	2,368
Loss 1.9 per cent.	

FT. WORTH, TEXAS STOCK YARDS.

Number shipped	1,168
Died	66
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Number healthy	1,102
Loss 5.6 per cent.	

MONTGOMERY, ALABAMA STOCK YARDS.

Number shipped	140
<hr/>	
Number healthy	140

The following is an itemized statement of the interstate shipments passing under our supervision, showing the different classes of animals and the states and countries to which they were shipped, July 1, 1922, to December 31, 1922:

State.	No. ship- ments.	Cattle.	Horses. and mules.	Hogs.	Sheep.	Goats.	Dogs.	Total.
Alabama.....	275	54	6,197					6,251
Arizona.....	2		46					46
Arkansas.....	135	1	2,411	8				2,420
Brazil.....	1			1				1
California.....	8	49	11	1				61
Canada.....	1	1						1
Colorado.....	13	8	33	1	1			43
Connecticut.....	14	99	252					351
Florida.....	6	3	53					56
Georgia.....	5	4	27					31
Idaho.....	7	28			6			34
Indiana.....	50	356	23	29	3			411
Iowa.....	176	2,226	159	43	1			2,429
Kansas.....	8	26	12					38
Kentucky.....	80	28	1,316	7	253			1,604
Louisiana.....	88	67	1,804		1			1,872
Maine.....	1						1	1
Maryland.....	5	1	28	1				30
Massachusetts.....	1	24						24
Mexico.....	2	38						38
Michigan.....	139	23	1,043	21				1,087
Minnesota.....	25	9	63	9	2			83
Mississippi.....	226		5,617	7				5,624
Missouri.....	58	219	173	39	126	1	2	560
Nebraska.....	10	72		9				81
New Hampshire.....	5		132					132
New York.....	9	4	7	3				14
North Carolina.....	52	2	1,320					1,322
North Dakota.....	1	23						23
Ohio.....	17	23	11		1		2	37
Oklahoma.....	8		23		131			154
Oregon.....	1		6					6
Pennsylvania.....	12	35	3	28				66
South America.....	1			39				39
South Carolina.....	14		343					343
South Dakota.....	7	3	1	3				7
Spain.....	1	22						22
Tennessee.....	278		7,084	1	40			7,125
Texas.....	15	49	77	1				127
Utah.....	1				5			5
Vermont.....	1		20					20
Virginia.....	5	1		3	1			5
Washington.....	4	1	18	2				21
West Virginia.....	37	4	677	1				682
Wisconsin.....	148	87	684	7				778
Wyoming.....	4		6				3	9
Total.....	1,957	5,590	29,680	264	571	1	8	34,114

During the last six months of the fiscal year the following shipments were made:

State.	No. ship-ments.	Cattle.	Horses and mules.	Hogs.	Sheep.	Goats.	Dogs.	Total
Alabama.....	304	32	7,717					7,749
Arizona.....	2		26	5				31
Arkansas.....	143	2	3,227	2				3,231
California.....	3		6				1	7
Canada.....	3	5	4					9
Colorado.....	9	4	24	5				33
Connecticut.....	20	22	454	1				477
Cuba.....	1		30					30
Delaware.....	4		77					77
Florida.....	5	1	57	1				59
Georgia.....	6	1	129					130
Indiana.....	110	241	179	93				513
Iowa.....	189	1,966	186	86				2,238
Kansas.....	11	12	14	4				30
Kentucky.....	128	28	2,316	5				2,349
Louisiana.....	106	1	3,500					3,501
Maine.....	1		2					2
Maryland.....	9		165	3				168
Mexico.....	1	9						9
Michigan.....	147	53	968	40				1,061
Minnesota.....	49	95	93	46				234
Mississippi.....	291	5	7,211	14				7,230
Missouri.....	83	329	206	84				619
Montana.....	5	5					3	8
Nebraska.....	14	99	5	4	1			112
New Hampshire.....	7	65	158					223
New Jersey.....	3		46	2				48
New York.....	6	73	28					101
North Carolina.....	90		2,226					2,226
North Dakota.....	25	49	15	5				69
Ohio.....	20	37	3	6	4			50
Oklahoma.....	8	5	11	7				23
Oregon.....	3	32	1					33
Panama.....	1			2				2
Pennsylvania.....	23	31	36	7				74
Rhode Island.....	2	34						34
South Carolina.....	50		1,207					1,207
South Dakota.....	18	2	23	24				49
Spain.....	1		527					527
Tennessee.....	415	15	9,649	3	1	1		9,669
Texas.....	1	2						2
Utah.....	1		1					1
Vermont.....	1		28					28
Virginia.....	3		1,018					1,018
Washington.....	1		3					3
West Virginia.....	54		1,253	2				1,255
Wisconsin.....	249	118	1,543	21				1,682
Wyoming.....	1						1	1
Total.....	2,627	3,373	44,375	472	6	1	5	48,232

The Fifty-third General Assembly made an adequate appropriation to take care of tuberculosis eradication and this division expects to put on a strenuous campaign to carry out this work. They also passed a law permitting the various county boards to make appropriations to cover operating expenses in their various counties which has been signed by the Governor and becomes a law on July 1, 1923.

Edgar County has been doing this work of tuberculosis eradication under State and Federal cooperation for some time and they are to be congratulated upon being the first county in the State to comply with all the requirements. They are now in the Modified Accredited Area, under which the following rules must be enforced:

The importation of cattle into the county is prohibited except when such cattle are accompanied by a certificate indicating that the cattle are from a fully accredited herd or have been subjected to an approved tuberculin test applied by an accredited veterinarian within 60 days of importation. Exception will be made in case of cattle for immediate slaughter (to be slaughtered within 10 days) and steers, provided such cattle are kept separate and apart from other cattle until slaughtered or removed from the county. No cattle shall be offered at any public sale in said county for breeding or dairying purposes, except when such cattle have been subjected to a tuberculin test approved by the State Department of Agriculture and found free from contagious or infectious diseases.

Below is a report of cattle tested during the fiscal year:

Month and year.	No. tested.	No. reacted.
July, 1922	6,315	412
August, 1922	7,877	377
September, 1922	6,154	177
October, 1922	10,175	572
November, 1922	8,775	485
December, 1922	7,633	425
January, 1923	9,123	503
February, 1923	8,628	551
March, 1923	7,366	458
April, 1923	10,436	565
May, 1923	9,804	690
June, 1923	13,363	1,096
	<hr/>	<hr/>
	105,649	6,311
Accredited herds in Illinois.....	454 representing	10,258 cattle
Herds under Supervision.....	1,923 representing	109,366 cattle
Herds passed one clean test.....	971 representing	19,238 cattle

Good work has been done under the cooperative agreement between the State and the Government in the eradication and control of cholera and other contagious hog diseases.

The number of stallion and jack licenses issued for the fiscal year is 4,197 or 168 less than the previous year. Sixty-four per cent of the total number of stallions and jacks are purebred and 36 per cent are grades. Seventy-eight per cent the total number of stallions are purebred and 22 per cent are grades and 39 per cent of the total number of jacks are purebred and 61 per cent are grades.

DIVISION OF DAIRY HUSBANDRY.

STILLMAN J. STANARD, *Superintendent.*

During the year ending July 1, 1923, the Division of Dairy Husbandry has followed its policy of working for more economical production of dairy products, the production of a better quality of dairy products and the encouragement of a greater consumption per capita.

FAIR EXHIBITS.

More attention has been given to exhibiting at fairs than in past years and dairy exhibits were placed in more than thirty Illinois cities. There is an ever increasing demand for dairy exhibits manifested and it is only with difficulty that this division has been able to take care of the requests made.

DAIRY MEETINGS.

A total of eighty-five dairy meetings have been held for the benefit of farmers of Illinois at which there was an average attendance of slightly over three hundred per meeting.

The dairy discussions entered into by authorities furnished by this division were on general dairy topics and from the results accomplished during this period we feel that dairy meetings continue to be one of the most profitable ways of reaching the farmers. The State dairy motion picture played an important part in making these meetings a success.

ACTIVITIES IN BEHALF OF BETTER BREEDING.

At all meetings in connection with fair exhibits, in literature distributed and in our newspaper publicity, we have emphasized the benefits derived from the use of well selected dairy sires who have production records back of them. We have endeavored to show the farmers of Illinois, who are keeping only a few cows, how it is possible through the formation of bull clubs and associations, to obtain the advantages derived from the use of a well selected dairy sire without its costing them more than it does the breeder who has a large herd of cows. We have also shown the farmers of this State how the use of a well selected sire will not only improve their herds but also how it may be done for less actual expenditure than the keeping of a scrub sire for this purpose.

The results obtained in this work are very evident for many bull clubs and associations have been and are being formed, all of which have proved satisfactory and beneficial.

LITERATURE DISTRIBUTED.

The division bulletin No. 312, known as "Dairy Economy and Sanitation" has proven to be the most popular farm bulletin ever published in this State and it has been impossible for the division to supply the de-

mand for this bulletin; however more than 50,000 of these have been placed in the hands of Illinois farmers.

Bulletin No. 300, known as "The Health and Welfare of Our Nation" has also been in great demand, more than 30,000 of these having been distributed.

COOPERATION.

The Division of Dairy Husbandry has continued its policy of cooperating with the Illinois State Dairymen's Association, the Illinois Butter Manufacturers' Improvement Association and other organizations which are working for the betterment of farm conditions.

CONCLUSION.

It is very gratifying for us to note that recent estimates all tend to show that there has been an increase of approximately twenty-five pounds of butter fat produced yearly by the average Illinois cow over what was being produced a few years ago. This, we believe, not only indicates that the farmers of Illinois are receiving several hundred thousand dollars per year per county more than they would have otherwise received, but also goes to show that the work being done by the several agencies engaged in the promotion of dairy husbandry is accomplishing a valuable service.

DIVISION OF FOODS AND DAIRIES.

ALFRED H. JONES, *Superintendent.*

In pursuance with paragraph 4 of section 1 of the Illinois State Food Law which provides that the Superintendent of Foods and Dairies shall make annual report to the Director of Agriculture, Hon. B. M. Davison, of his work and proceedings and shall report in detail the number of inspections made during the year, that is from July 1, 1922, to June 30, 1923, the date of my last report, I herewith submit this my annual report and also financial statement of the Division of Foods and Dairies from July 1, 1922, to June 30, 1923, and also a summary of work performed by the division for the year aforesaid.

As will be seen from the summary of the work for the year we have analyzed 9,049 samples of suspected foods, and 299 samples for the Division of Purchases and Supplies. We have destroyed 1,240,350 pounds of unfit foods for human consumption. We have held 2,474 hearings and have caused 345 prosecutions to be made, and have collected in licence fees and fines \$84,792.66.

The work performed by the Division of Foods and Dairies has been much more satisfactory the past year than in any former year for the reason that we have had better cooperation with the food officials of the various other states in the Union as well as with the Federal Government, and have been materially assisted by the food officials of the large cities of our State, and especially the city of Chicago.

We have received very much assistance from the State's attorneys of the various counties in the State, and especially from the State's attorney of Cook County and his assistants where a large number of the prosecutions for violations of the various food laws have occurred, and thanks are hereby extended to the State's attorney of Cook County and his assistants as well as to all the other State's attorneys in the State for the assistance rendered the division in the prosecution of violations of our food laws for without the aid and assistance of the State's attorneys throughout the State we would fail in our prosecutions and the work of the division could not be carried on successfully.

The division has done much more in the way of enforcing the Egg Law, the Stock Foods Law, and the law in regard to paints and oils than in any former year and much attention has been given to the work of sanitary inspection of establishments where foods have been prepared, manufactured and sold.

The division now has completed a splendid laboratory for the analysis of stock foods, paints and oils, farm fertilizers, etc., at the Capitol of our State and the license fees for commercial feeding stuffs, commercial fertilizers, commission merchants, cold storage warehouses, egg deal-

ers egg breaking establishments, and ice cream manufacturers are now collected through the office at Springfield.

Under the Commission Merchants Act there have been a great number of claims satisfactorily settled without prosecution but it has been found that it is necessary to prosecute in quite a number of cases. In this way our shippers have been very materially assisted throughout the State.

More attention is being given to the sanitary laws to see that goods are prepared and stored and sold in sanitary condition, also to see that dairies, creameries and other places where milk and dairy products are prepared are kept in sanitary condition so that all foods going to the consumer may be sanitary and wholesome.

The division has devoted much time to the Cold Storage Law and its enforcement and finds that foods are in much better condition and that the laws for storing foods are given more attention by the cold storage warehouses than at any time in the past.

As above stated there is herewith submitted a financial report of the division which is self-explanatory, as well as a summary of the work performed by the division during the time aforesaid.

FINANCIAL STATEMENT OF THE DIVISION OF FOODS AND DAIRIES—JULY 1, 1922 TO JUNE 30, 1923.

Classification.	Biennial appropriations.	Bills passed July 1, 1921, to June 30, 1922.	Bills passed July 1, 1922, to June 30, 1923.	Total bills passed July 1, 1921, to June 30, 1923.	Balance June 30, 1923.
Salaries of State officers.....	\$ 11,400	\$ 5,700	\$ 5,513	\$ 11,213	\$ 187
Salaries and wages.....	279,500	102,374	110,284	212,658	66,842
Office expense.....	34,000	16,668	17,297	33,965	35
Travel.....	82,000	28,656	34,491	63,147	18,853
Operation.....	2,800	1,015	1,309	2,324	476
Repairs and equipment.....	12,190	10,134	619	10,753	1,437
Total.....	\$421,890	\$164,547	\$169,513	\$334,060	\$87,830

JULY 1, 1922 TO JUNE 30, 1923.

Official samples	5,394
Division of Purchases and Supplies' samples.....	299
Unofficial samples	42
Illegal samples	3,613
Passed samples	1,424
Not analyzed samples (broken or duplicates).....	351
Not reported samples	10
Hearings held	2,474
Prosecutions filed	345
Food destroyed, pounds.....	1,240,350

Division of Foods and Dairies collected license fees and fines as follows:

Fines assessed	\$ 5,917.00
Licenses for commercial feedings stuffs.....	41,450.00
Licenses for commercial fertilizer.....	2,260.00
Licenses for commission merchants.....	4,190.00
Licenses for ice cream manufacturers (wholesale).....	3,830.00
Licenses for ice cream manufacturers (retail).....	725.00
Licenses for egg dealers (class one).....	7,538.00
Licenses for egg dealers (class two).....	10,355.00
Licenses for egg breaking plants.....	4,500.00
Licenses for cold storage warehouses.....	1,925.00
Licenses for cream and milk testers.....	2,102.66
Total	\$84,792.66

DIVISION OF GAME AND FISH.

WILLIAM J. STRATTON, *Chief Warden.*

The biennial report of Governor Small to the Fifty-third General Assembly recommended legislation along the lines of conservation of our natural resources and strongly emphasized the need of more effectually protecting, reclaiming and propagating Illinois game and fish. The old Game and Fish Laws, with but few changes, had been on the statute books for the past decade or two and many provisions had become practically obsolete making a complete recodification necessary in order to carry out the recommendations of the Governor. The task was undertaken early in the session by the Senate and House committees on Game and Fish collaborating with the Governor and the Division of Game and Fish and the result was the enactment of the two laws known as the "Game Code of Illinois" and the "Fish Code of Illinois."

In this work the committees and the Division of Game and Fish invited and received splendid cooperation and valuable assistance from devotees of the "Great Out-Doors," authors and writers, sportsmen, naturalists, conservation and reclamation societies, and commercial houses both within and without the State, while the Game and Fish Laws of nearly every state were carefully studied with a view of meeting all possible requirements and conditions in Illinois and the best thought from all these sources was incorporated in the two codes.

Owing to the radical differences in climatic conditions in the northern, central and southern counties of Illinois, comprehending a north and south line of more than three hundred and eighty-five miles, the State is divided into three Latitudinal Zones, wherein the open seasons for killing fur-bearing animals, squirrels and rabbits are made to conform as nearly as possible to the natural seasons.

The Northern Zone comprises the counties of JoDaviess, Stephenson, Winnebago, Boone, McHenry, Lake, Carroll, Whiteside, Ogle, Lee, DeKalb, Kane, DuPage, Cook, Rock Island, Mercer, Henry, Bureau, Putnam, LaSalle, Kendall, Grundy, Will, Kankakee, Henderson, Warren, Knox, Stark, Peoria, Marshall, Woodford, Livingston and Iroquois.

The Central Zone comprises the counties of Hancock, McDonough, Fulton, Tazewell, McLean, Ford, Vermilion, Champaign, Piatt, DeWitt, Logan, Mason, Menard, Cass, Schuyler, Brown, Adams, Pike, Scott, Morgan, Sangamon, Macon, Moultrie, Douglas, Edgar, Calhoun, Greene, Jersey, Macoupin, Christian, Montgomery, Shelby, Coles, Cumberland and Clark.

The Southern Zone comprises the counties of Madison, Bond, Fayette, Effingham, Jasper, Crawford, St. Clair, Monroe, Clinton, Washington, Marion, Jefferson, Clay, Wayne, Richland, Lawrence, Edwards, Wabash, Randolph, Perry, Franklin, Hamilton, White, Jackson, William-

son, Saline, Gallatin, Union, Johnson, Pope, Hardin, Alexander, Pulaski and Massac.

Many changes were made in the new codes to meet the requirements of these zones and the following statement of open seasons and licenses will no doubt give general information to all who are interested in the work of the division:

OPEN SEASONS.

(Effective July 1, 1923.)

The open seasons for Game and Migratory Birds, Fur-Bearing Animals, Squirrels, Rabbits, Fish, Frogs, Mussels and Turtles, zoned or otherwise, are as follows, with all dates inclusive:

GAME AND MIGRATORY BIRDS.

	Daily limit.
Bob White Quail—November 10 to December 10.....	12
Brants—September 16 to December 31.....	8
Cock Pheasants—November 10 to November 15.....	2
Coots (Mudhens)—September 16 to December 31.....	15
Ducks (except Wood and Eider)—September 16 to December 31.....	15
Geese—September 16 to December 31.....	8
Mourning Doves—September 1 to September 30.....	15
Plovers (Black-Breasted and Golden, Greater and Lesser Yellowlegs)— September 16 to December 31.....	15
Prairie Chickens—November 10 to November 21.....	3
Rails—September 16 to November 30.....	15
Snipes (Wilson and Jack)—September 16 to December 31.....	15
English Sparrows, Crows, Blackbirds, Blue-Jays, Cooper's Hawks, Sharp- Shinned Hawks, Goshawks, Duck-Hawks, Pigeon Hawks, Great Horned Owls, and Cormorants—January 1 to December 31.....	No limit

FURBEARING ANIMALS (Except Muskrats).

Northern Zone—November 1 to February 15.....	No limit
Central Zone—November 15 to February 1.....	No limit
Southern Zone—November 15 to January 15.....	No limit

MUSKRATS.

Northern Zone—November 1 to March 31.....	No limit
Central Zone—November 15 to March 15.....	No limit
Southern Zone—November 15 to March 1.....	No limit

RABBITS.

Northern Zone—November 10 to January 31.....	15
Central Zone—November 10 to January 1.....	15
Southern Zone—November 10 to January 1.....	15

SQUIRRELS.

Northern Zone—September 1 to December 1.....	10
Central Zone—August 1 to December 1.....	10
Southern Zone—July 1 to December 1.....	10

FISH, FROGS, MUSSELS AND TURTLES.

Bass—June 15 to March 1 (hook and line only)—daily limit 10.
 Crappies, Yellow or Ringed Perch, Sunfish, Goggle-eyes and Blue Gills (hook and line only)—January 1 to December 31.
 Buffalo, Bullhead Cat, Carp, Catfish and White-perch (by seines)—July 31 to April 15 (with size limits).
 Black-fins, Chubs, Herring and Long Jaws—(January 1 to December 31), (mesh size limited).
 Lake Perch—(Size and mesh limit)—January 1 to December 31.
 Pickerel, Pike, Pike-perch, Wall-eyed Pike, Jack or Yellow Salmon (hook and line only)—January 1 to December 31.

Grey-Pike, Sauger-Pike, Blue-Pike or Sand-Pike—(No limit on imported stock).
 Lake-Trout and White-Fish—December 1 to November 1 (size and mesh limit).
 Frogs—(Size limit)—July 1 to April 1.
 Mussels—(Open waters)—April 15 to November 30; (closed waters or fish preserves)—June 1 to November 30.
 Turtles—(Size limit)—January 1 to December 31.

LICENSES AND PERMITS.

License and expiration.	Including clerk's fees.
Resident Hunting—June 30.....	\$ 1.00
Non-resident Hunting—June 30.....	10.50
Trapping—Resident—March 31.....	1.00
Non-resident Trapping—March 31.....	10.50
Taxidermist—June 30.....	5.00
Permit to collect eggs, etc.—June 30.....	5.00
Breeder Wild Game Permit—June 30.....	5.00
Breeders' Permits—Furbearing Animals—June 30.....	2.00
Breeders' Permits—Ferrets—June 30.....	10.00
Fishing, Resident, hook and line—December 31.....	.50
Fishing, Non-resident, hook and line—December 31.....	1.25
100 Yd. Seine—April 15 (Resident).....	10.25
Dip Net, Hoop or Fyke—April 15 (each) (Resident).....	1.10
Basket or Trap Net—April 15 (each) (Resident).....	.60
Steam Tug—April 15 (Resident).....	25.25
Gasoline Launch—April 15 (Resident).....	15.25
Sail-boat or Row-boat—April 15 (each) (Resident) (Lake Michigan only)	10.25
100 Yd Seine—Non-resident—April 15.....	40.25
Dip Net—Non-resident—April 15.....	4.25
Fyke Net—Non-resident—April 15.....	4.25
Trap Net—Non-resident—April 15.....	2.25
Basket Net—Non-resident—April 15.....	2.25
Steam Tug—Non-resident—April 15.....	400.25
Gasoline Launch—Non-resident—April 15.....	100.25
Sail or Row-boat—Non-resident—April 15 (each) (Lake Michigan only)	60.25
Mussel—Resident—November 30.....	1.25
Mussel—(Dredge)—Resident—November 30.....	25.25
Mussel—(Bar)—Resident—November 30.....	2.75
Mussel—Non-resident—November 30.....	25.50
Mussel—(Dredge)—Non-resident—November 30.....	25.50
Mussel—(Bar)—Non-resident—November 30.....	3.00
Wholesale Fish Market and Dealers—April 15.....	25.00

NEW HOOK AND LINE FISH LICENSE.

The new Game and Fish Codes embrace many radical changes from the old law. Of special interest is the new Resident Hook and Line Fishing License of 50 cents for each person over the age of 21 years made necessary to create a fund to propagate fish in the various preserves, maintain the new hatcheries provided under the new code for the Northern, Central and Southern Zones of the State and for transporting stock fish to every part of the State where suitable waters and conditions prevail as well as to carry on the stupendous work of reclaiming fish where natural preserves are being destroyed by drainage interests.

Under the new code it is lawful to fish with hook and line at or near any dam except when such waters are closed by the division to protect young fish planted therein.

The Fish Code provides that black bass can only be caught with hook and line and only between June 15 and March 1, inclusive. It is unlawful to buy or sell black bass at any time. The daily catch is limited to 10 and all under 10 inches in length must be returned to waters from which taken without unnecessary injury.

Set and trot lines can be used with any number of hooks. Live bait can be used in open waters, but only dead bait can be used on such lines in fish preserves.

Crappies, yellow or ringed perch, sunfish, goggle-eyes and blue-gills can be caught with hook and line only, without limit as to size and quantity and may be bought and sold. They may also be imported for commercial purposes from without the State.

Commercial fish such as buffalo, bull-head cat, carp, catfish and white perch may be caught with the use of seines between July 31 and April 15. Commercial houses are not permitted to have these fish in possession between April 15 and June 1. The new Fish Code makes it unlawful to catch or take buffalo of less than fifteen (15) inches in length, bull-head cat of less than six (6) inches in length, dressed, and eight (8) inches in length, undressed, carp of less than fifteen (15) inches in length, catfish of less than thirteen (13) inches in length, undressed, or nine (9) inches, dressed, catfish (blue or channel) of less than thirteen (13) inches in length, undressed, or nine (9) inches dressed, or perch (white) of less than ten (10) inches in length, except by hook and lines, and if any such fish under such respective lengths are caught or taken by any other means, the same shall be immediately returned to the waters from which taken without unnecessary injury.

Black fins, chubs, herring and long-jaws may be taken with nets the meshes of which are neither more or less than one and one-quarter inches square. Lake perch except when taken by hook and line cannot be less than seven (7) inches and nets used in taking must have meshes not more nor less than one and one-quarter inches square. Pickerel, pike and pike-perch, commonly called wall-eyed pike, jack and yellow salmon can be taken with hook and line only.

Commercial houses may import these varieties but possession of pike or pickerel of less than fifteen (15) inches in length and pike-perch or wall-eyed pike, jack or yellow salmon of less than thirteen (13) inches in length is unlawful. It is not unlawful for commercial houses to have in possession gray-pike, sauger-pike, blue-pike or sand-pike caught in waters without the jurisdiction of Illinois. Lake trout and white-fish if not less than one and one-quarter pounds dressed can be taken between December 1 and November 1, with nets, the meshes of which are not less than two and one-quarter inches square. Minnows can be taken and sold and used for bait only.

The new Fish Code provides for fishing licenses, fishing device licenses, mussel licenses and wholesale fish market and dealers licenses with corresponding fees for county, city and village clerks, the only officers authorized to issue such licenses, but in no case authorized to issue permits in lieu of licenses; a taxidermist's license and a wholesale fish market or dealer's license being the only exceptions to the above as they are secured directly upon application to the Division of Game and Fish. This provision applies also to the securing of permits such as permits to raise, breed and sell game animals and birds, to breed fur-bearing animals and to collect the same and eggs and nests of game birds for scientific purposes. These permits are all issued directly by the Division of Game and Fish.

The new codes carry heavy penalties for illegal methods of hunting and fishing as well as the use of illegal devices. It is unlawful to hunt game with ferrets, guinea pigs, weasles or rats or waterfowl from an

electric, gas or steam launch, sail boat, aero or hydroplane, or towed boat or from a boat having been towed but cut loose under speed, or use a rifle, swivel gun, trap, snare or net, sneak-boat, or sink-box, artificial ambush or kill game from an automobile or mechanically driven vehicle.

It is also unlawful to use a trammel net or take fish with a snare, spear, gig, grain, firearms of any kind or use an artificial light to lure them. The use of lime, acid, medical, chemical or mechanical compound, or dope of any medicated drug, fish berry, dynamite, giant powder, nitroglycerine or explosive is also prohibited. In fact the new codes cover practically every possible condition relative to hunting and fishing. The new codes permit owners and tenants and their children actually residing on the land to hunt and fish without licenses during lawful seasons, but does not permit them to pursue and destroy unprotected game and birds on the land of another without a license and permission of owner or tenant.

RECLAMATION AND DISTRIBUTION.

During the past year the work of reclamation and distribution of fish has greatly increased over former years. Approximately 60 carloads of bass, crappies, sunfish, blue gills, goggle-eyes and other varieties have been taken from the Illinois River and other slack streams as well as many carloads of bass, perch, trout, sunfish, etc., from the hatcheries at Spring Grove and Lincoln Park, Chicago and distributed in practically every county in the State. This distribution does not include the enormous amount of fish salvaged from overflowed low lands and lakes and returned to the adjacent rivers. Salvage crews are constantly employed in various sections of the State and rescue work successfully carried on where drainage projects and drouth endanger both game and commercial varieties of fish.

The demand for stock fish, however, has greatly exceeded the present facilities of the division and to meet this situation, the Fifty-third General Assembly made a special appropriation of \$100,000 for three or more hatcheries, including purchase of lands, maintenance, etc., to be located in the various zones of the State. Sites for these additional hatcheries will be selected and construction work begun in the immediate future.

NO ONE TAXED TO MAINTAIN DIVISION.

The Division of Game and Fish is not only self sustaining but has returned to the State treasury more than \$53,000 in cash and more than \$13,000 in food fish delivered to the various State institutions during the past biennial period ending June 30, 1923.

No citizen of the State has paid one cent in taxes to maintain the division as all its expenses, including salaries, except the Chief Warden's (\$3,600), wardens' wages, office expense, travel, transportation, operation of the State Game and Fish Car, reclamation and rescue work, distribution, equipment, repairs, permanent improvements, etc., are more than met from the sale of licenses to such citizens and non-residents as care to hunt and fish and from fines collected from violators of the Game and Fish Laws.

Below is an itemized statement of the entire receipts and disbursements for the year beginning July 1, 1922 and ending June 30, 1923, followed by a summary for the biennial period ending June 30, 1923.

RECEIPTS AND DISBURSEMENTS OF THE DIVISION OF GAME AND FISH
FROM JULY 1, 1922, TO JUNE 30, 1923.

RECEIPTS.		
Hunting licenses	\$186,336.38	
Trapping licenses	8,508.75	
Fishing licenses	21,186.00	
Wholesale licenses	3,825.00	
Game violations	14,094.90	
Fish violations	7,791.90	
Permits	2,141.00	
Fishin activities	5,513.40	
Miscellaneous	44.56	
Total		\$249,441.89
EXPENDITURES.		
Salaries and wages	\$151,112.16	
Office expense	6,614.58	
Traveling expense	37,571.97	
Operating expense	9,078.45	
Repairs	5,574.94	
Equipment	3,934.84	
Permanent improvements	9,492.52	
Total		\$223,379.46
Excess receipts over expenditures		\$26,062.43

TOTAL RECEIPTS AND DISBURSEMENTS OF THE DIVISION OF GAME AND
FISH FOR THE BIENNIAL PERIOD JULY 1, 1921, TO JUNE 30, 1923.

RECEIPTS.		
Hunting licenses	\$364,066.48	
Trapping licenses	18,474.50	
Fishing licenses	42,744.05	
Wholesale licenses	7,425.00	
Game violations	24,951.93	
Fish violations	12,948.95	
Permits	3,934.00	
Fishing activities	7,021.81	
Miscellaneous	72.11	
Total		\$481,638.83
EXPENDITURES.		
Salaries and wages	\$290,909.01	
Office expense	12,660.15	
Traveling expense	69,994.01	
Operating expense	17,915.21	
Repairs	10,746.44	
Equipment	8,876.73	
Permanent improvements	16,733.84	
Total		\$427,835.39
Excess receipts over expenditures		\$53,803.44
To this should be added the salvage value of 68,581 pounds of con- fiscated fish delivered to State hospitals and charitable institutions		13,716.20
Total net profit to State		\$67,519.64

DIVISION OF APIARY INSPECTION.

A. L. KILDOW, Chief Inspector.

Just a little comparison to begin my report. From July, 1921, to July, 1922, we visited 739 apiaries having 14,523 colonies. One hundred seventeen apiaries had American foul brood and 72 had European foul brood.

This year we started on the plan of county organization and appointed a deputy inspector for these counties, wherever a suitable man could be found. This plan worked very successfully, but we could not carry out the plan perfectly, on account of the shortage of funds. With the increase in our appropriation, we hope within the next two years to have the entire State under these organizations and active inspectors working in every district. These various organizations hold field meets and demonstration meetings, which have a two fold object:

First—To create interest in keeping bees in an up to date manner and to obtain knowledge of the best methods.

Second—To teach the beekeepers to know and how to handle bee diseases.

By these organizations the beekeepers are brought together and the actual work is demonstrated and questions answered by the inspector, as well as the condition of the district explained. Thus the inspector is able to reach a number of beekeepers at one time and to find out just who is in need of assistance.

Under this plan, from July 1, 1922, to July 1, 1923, we inspected 1,112 apiaries with 19,697 colonies and found 204 apiaries to have American foul brood and 125 to have European foul brood.

Much of this disease is already cleaned up and in the northern part of the State they are rejoicing over the result, while the south and other portions are equally active in getting in condition for real business in beekeeping.

Fifteen counties have organized associations this year and those previously organized have been strengthened and stimulated to work for improvement of our industry.

Date.	Number colonies.	Number apiaries visited.	Number apiaries A. F. B.	Number apiaries E. F. B.	Number days.	Per diem.	Expense.
1922							
July.....	4,292	160	28	9	68½	\$413.50	\$192.60
August.....	2,390	137	23	16	63	379.00	173.24
September.....	1,784	104	22	14	56	353.00	149.81
October.....	195	17	1	1	10	64.00	21.85
November.....					2	14.00	
December.....					4	28.00	15.80
1923							
January.....					2	14.00	8.34
March.....					6	42.00	25.16
April.....	1,318	125	14	15	45½	276.50	112.21
May.....	5,598	286	64	45	97	573.00	291.40
June.....	4,115	283	52	25	83	487.87	232.04
Total.....	19,697	1,112	204	125	437	\$2,644.87	\$1,222.47

DIVISION OF PLANT INDUSTRY.

O. T. OLSEN, *Superintendent.*

The annual report of this division for the past fiscal year indicates economic progress and sanitary improvement in the nursery industry of Illinois.

Considering a substantial increase of forty-eight nurseries during the past year, it is encouraging to note a corresponding decrease of forty-four precautionary measures.

Of the total of 354 nurseries certified, 152 were reported practically free from serious pest infestation, while in seventeen cases inspected, certificates of inspection were not granted owing to infestation of premises and failure to comply with prescribed requirements. Of this number, ten concluded to abandon nursery operations.

In the main, however, acknowledgement is due the Illinois nurserymen for their splendid and effective cooperation.

During the past fiscal year, barberry activities were practically limited to the Federal Bureau of Plant Industry, as no provision had been made by the State to carry on this work. Of the Federal appropriation, there was \$20,000 expended in barberry eradication throughout the northern counties of the State where a fairly complete farm to farm survey had been made prior to July 1, 1923.

With an appropriation of \$10,000 now available by action of the Fifty-third General Assembly, and a Federal appropriation of \$30,000 for the ensuing year, a vigorous barberry eradication campaign is contemplated as indicated by attached map and detailed report submitted by the Chief State Inspector.

Substantial evidence of a cooperative spirit among property owners of the infested cedar rust area in Union County is encouraging, and gratifying progress has been made by inspectors of this division during the past season. Cedar rust eradication will be carried on vigorously from time to time as inspectors of the division are available for this work.

A Flag Smut survey completed prior to July 1, 1922, disclosed additional infestation, necessitating an extension of the quarantined area within a radius of about 700 square miles. Infestation was found much heavier than the previous year in fields where susceptible varieties were used.

Unexpected spread of Flag Smut, however, prompted a State-wide survey of all wheat growing counties and a total of 6,934 fields were examined during May and June. In addition to the original area infested the disease was found in five additional counties, namely, Macoupin, Greene, Scott, Logan and Hancock, as indicated by accompanying map and detailed report.

A recent Federal survey shows also an alarming spread of this pest westward through Missouri and Kansas.

Owing to such wide spread infestation, the Department of Agriculture has modified quarantine regulations very materially so that requirements now pertain only to the movement of straw from the infested counties.

General treatment or disinfecting of seed wheat and the use of highly resistant varieties in the infected sections is again recommended as imperative in the stamping out of this disease, and cooperation along this line is earnestly urged by this division.

The European Corn Borer, a threatening national menace, has continued to spread at an alarming rate throughout the eastern states, Ohio, Michigan and Canada and authorities agree that this unwelcome pest will inevitably reach Illinois and prove exceedingly destructive.

Control measures should be generally adopted in anticipation of the advent of this destructive alien enemy.

Attention is called to the accompanying detailed report of the Chief Seed Analyst, covering weed control, seed inspection and laboratory activities of this division during the past fiscal year.

The importance of general cooperation in carrying out provisions of the Weed and Seed Laws of Illinois should be thoroughly impressed on the farmers and seedmen of the State as an imperative factor in the production of pure, first quality seed and the maintenance of a high crop standard.

As indicated in a previous report the Weed Control Law of Illinois proved wanting and in some respects inoperative due to lack of provision for the collection of money due from negligent and hostile property owners who refuse to remit for expenses incurred on their premises. Accordingly, a bill entitled, "An Act in relation to Canada Thistles and Noxious Weeds," was prepared and submitted to the last General Assembly, but unfortunately defeated during the last rush hours of the session. As this bill was prepared with great care and based on authentic data compiled by the Seed Analysts Association of North America and the Seed Trade Association, and no serious objection had been found to the draft, I believe that our best agricultural interests are served by its passage.

The Canada thistle and noxious weed problem should be given greater attention throughout the State and adequate provision made for proper control in order to maintain a high crop standard and suppress cereal pests which have been increasing at an alarming rate during recent years.

As nearly 200 weeds and economic plants harbor the European Corn Borer among other destructive pests, the great importance of this field should be readily recognized as a contributing factor in the readjustment and rehabilitation of our great basic industry, agriculture.

DIVISION OF PLANT INDUSTRY—INSPECTION AND
CERTIFICATION OF NURSERIES.

P. A. GLENN, *Chief Inspector.*

During the year ending June 30, 1923, 354 nurseries and 7 green-houses were inspected.

The nurseries varied in size from less than one acre to 250 acres. The total acreage being 3,119, a gain of 92 acres over last year. The nurseries inspected include 281 with a total area of 2,771 acres devoted to nursery stock other than small fruits, and 73 with a total area of 348 acres devoted to small fruits. The following table shows the number of nurseries of various sizes inspected in 1921 and 1922:

Acreage.		1921.	1922
200 acres or more.....		3	2
100 acres or more, but less than 200.....		5	6
50 acres or more, but less than 100.....		7	6
25 acres or more, but less than 50.....		13	14
10 acres or more, but less than 25.....		30	25
5 acres or more, but less than 10.....		33	37
2 acres or more, but less than 5.....		58	62
1 acre or more, but less than 2.....		52	64
Less than 1 acre.....		105	138
Total		306	354

Certificates have been issued as follows:

Nurserymen's certificates	327
Dealer's certificates	141
Outside nursery permits to employ agents.....	45
Agent's permits	2,194
Greenhouse certificates	7

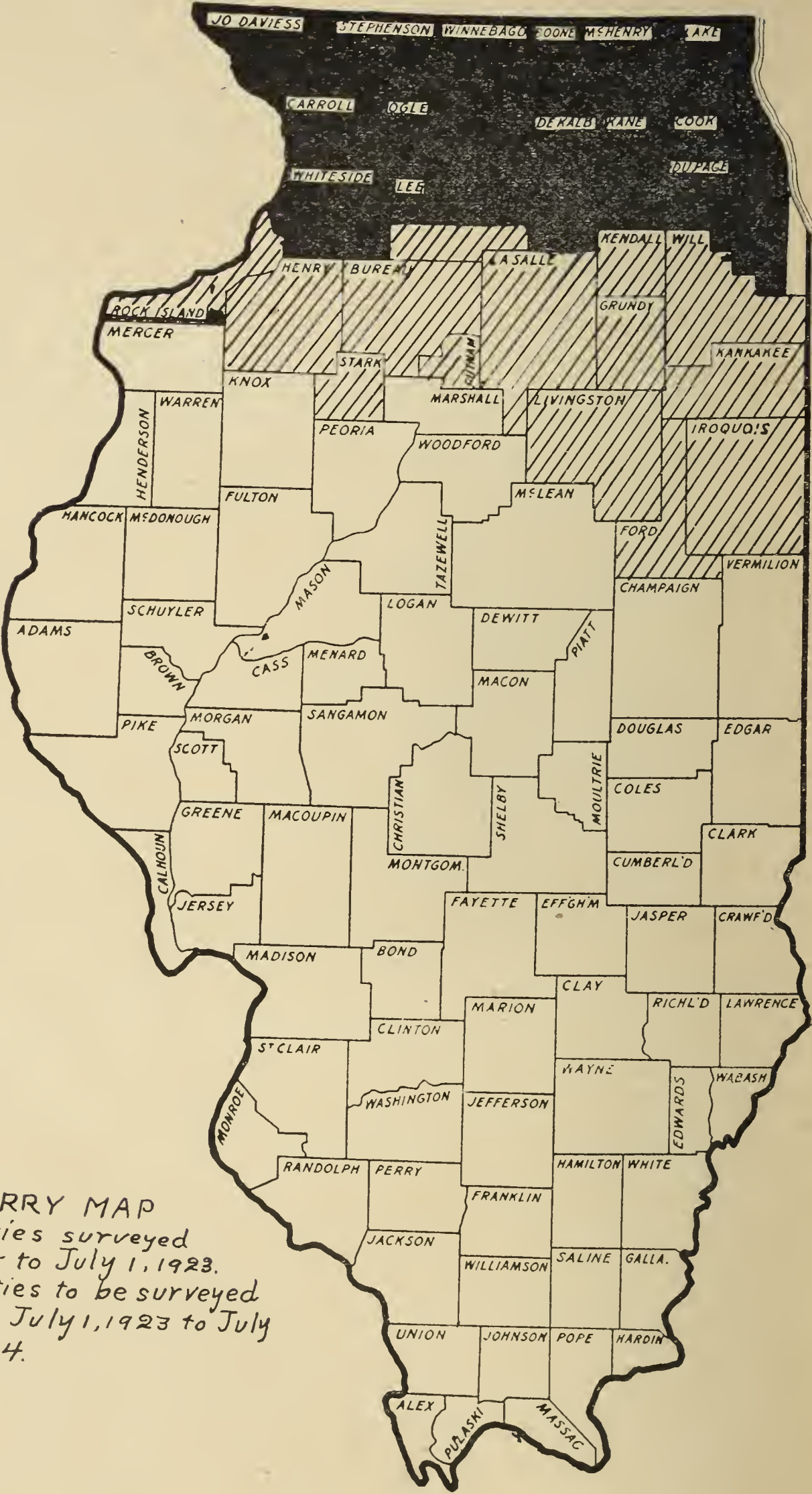
Certificates of inspection were refused in five cases on account of infestation of nursery and premises, and in twelve cases on account of non-compliance with requirements. In ten cases the nurserymen decided to discontinue the business. Aside from the forty-five outside nurserymen employing agents in the State 210 outside nurseries engaged in the wholesale or mail order business filed certificates of inspection as required.

The forty-five outside nurseries employing agents applied for and received permits for 2,042 agents, one nursery alone receiving permits for 1,175 agents. Illinois nurserymen have applied for and received permits for only 152 agents.

The following list gives the names of the insects and plant diseases found in the nurseries and the number of times each was made the subject of a precautionary measure:

Anthraxnose	82	Common barberry	5
San Jose scale.....	61	Pear blight	4
Oyster-shell scale	31	Cedar rust on cedar.....	2
Scurfy scale	25	Synipid galls on rose.....	2
Tree borers	22	Cottony maple scale.....	1
Woolly aphid of the apple.....	14	Black knot	1
Crown gall	8		
Forbes scale	7	Total	270
Cane bright	5		

In 152 of the nurseries inspected no serious pests were reported.



BARBERRY MAP
■ Counties surveyed prior to July 1, 1923.
▨ Counties to be surveyed from July 1, 1923 to July 1, 1924.

IMPORTATION OF NURSERY STOCK FROM FOREIGN COUNTRIES.

During the year the following kinds and amounts of nursery stock from foreign countries arrived in Illinois:

Kinds of stock.	Number of shipments.	Number of cases.	Number of plants.
Fruit stocks.....	4	5	53,000
Rose stocks.....	22	77	608,550
Bulbs.....	79	6,504	4,222,369
Seeds.....	5	15	10,160 lbs.
Miscellaneous.....	7	14	2,647

The fruit and rose stocks were inspected at the point of destination. A small amount of crown gall was found in fifteen of the shipments of rose stocks, and one shipment was badly infested necessitating the destruction of a large part of the shipment, and a small amount of the coiled rose slug was found in twelve of the shipments.

ERADICATION OF THE COMMON BARBERRY.

Owing to the absence of funds active work on the barberry eradication campaign was carried on almost wholly by the Federal Bureau of Plant Industry.

The work of this division was limited to the removal of such plantings as the Federal inspectors were unable to have removed, owing either to the neglect or refusal of property owners to remove them. Twenty-three such cases were reported to this office. Upon requests sent out by the office eight property owners removed their bushes, fourteen removed them after receiving official notice to do so, and in one case inspectors removed the bushes on the failure and refusal of the property owner to comply with the order.

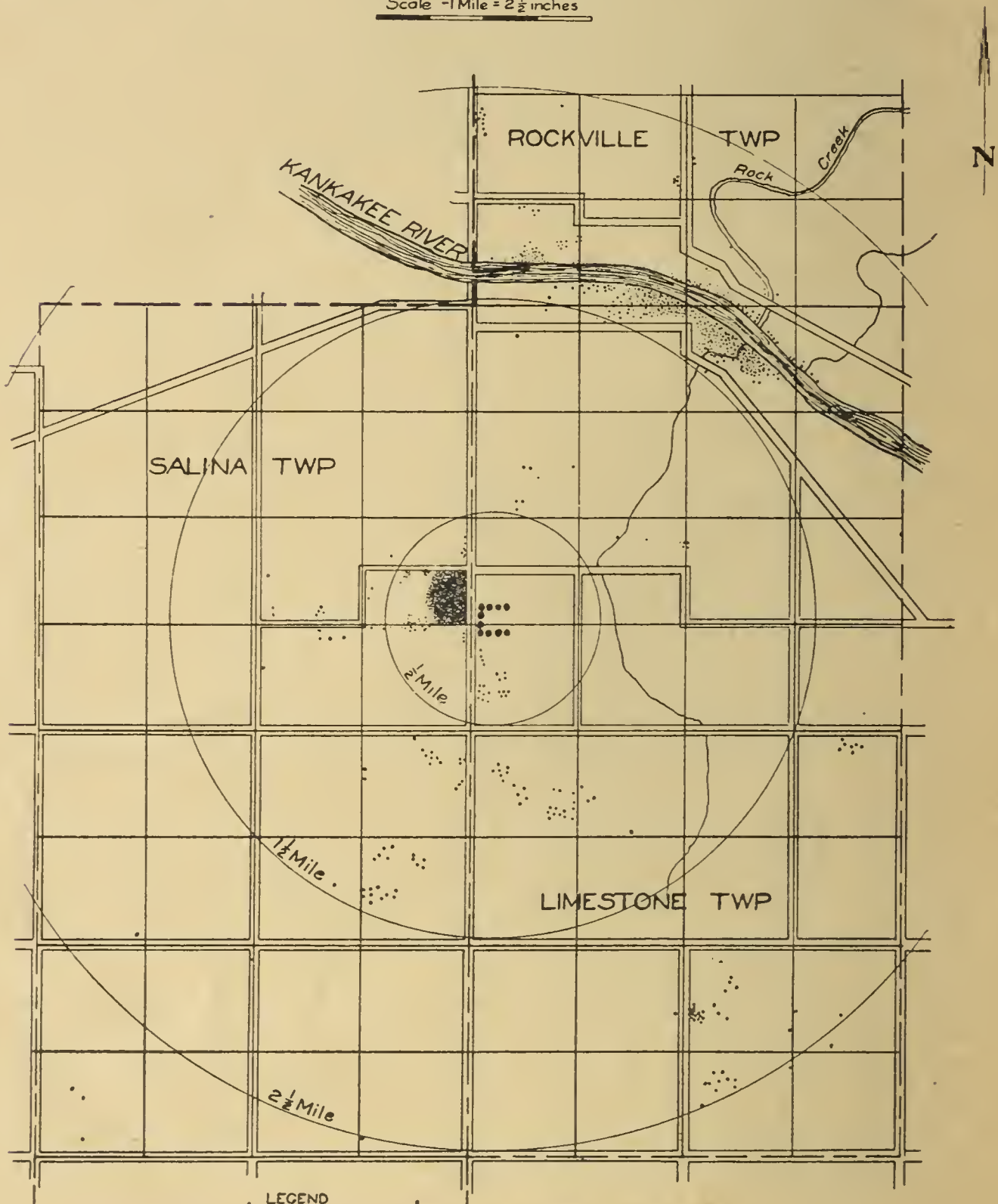
The amount expended by the Federal Bureau for the year was \$20,000. The amount of Federal funds available for continuing the work next year is \$30,000. An appropriation of \$10,000 was made available by the Fifty-third General Assembly for barberry eradication work for the biennium beginning July 1, 1923.

Practically a complete farm to farm survey was made in 14 counties in northern Illinois prior to July 1, 1923. With increased Federal funds and the State appropriation we expect to complete original surveys in thirteen more counties before the close of 1924. The counties in which work has been practically completed and those in which work will be done next year are shown in the map.

A new policy has been adopted in getting rid of barberry bushes found, which is giving much more satisfactory results. Formerly when bushes were located the owner was requested to grub them out and after repeated visits and letters involving much time and expense, a large per cent of the bushes still remained, and after bushes had been grubbed out frequent visits were necessary to see that sprouts from the roots remaining in the ground were kept down. It has been found that from eight to thirty pounds of salt, depending on the size of the bushes, applied to the bushes kill all the roots so as to prevent sprouting later.

AREA OF ESCAPED BARBERRIES IN KANKAKEE COUNTY ILLINOIS

Scale - 1 Mile = $2\frac{1}{2}$ inches



LEGEND

- Barberry hedge planted in 1848
- Escaped barberry bushes and seedlings, spread from original hedge. Total about 4000

July - October 1923
F.G. Anderson
State Dep't. of Agriculture
L.A. Black, Draftsman

The new policy is to offer to treat bushes free of charge with salt where they are not growing near valuable trees or other ornamental bushes which the owner wishes to save, and to dig out bushes so located as to make it impracticable to treat them. It is very rare that property owners do not consent to this arrangement, and this makes it possible to dispose of the bushes as soon as found. This plan is more economical both in time and expense, and removes the bushes more effectively.

During the year a total of 9,865 bushes were found and destroyed on 1,040 premises and in addition to this 2,486 bushes on 146 premises which had been reported in previous years were destroyed. In the entire campaign 139,737 barberry bushes have been destroyed. Bushes which have escaped from cultivation are more difficult to eradicate than the cultivated bushes because they are widely scattered through pastures, woodlands, and along fence rows. Many of them are small seedlings only a few inches high. These latter are hard to find and in order not to miss them it is necessary to make a very thorough survey in the vicinity of all old bushes. The accompanying map illustrates how widely escaped bushes become scattered from old bushes.

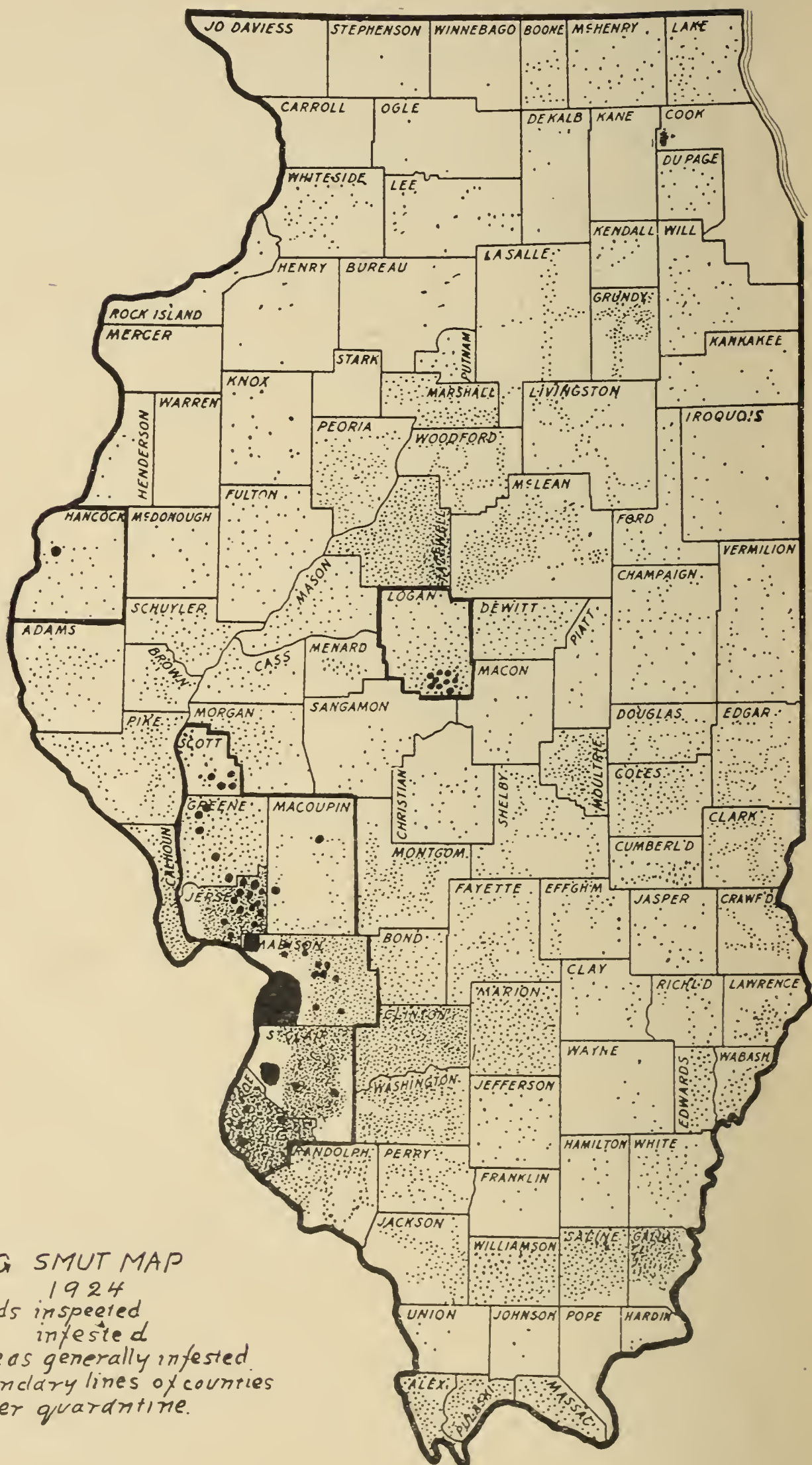
CEDAR RUST ERADICATION.

During the year inspectors visited 231 of the 709 properties on which red cedar trees were growing in the apple growing section of Union County. They reported that 161 property owners had removed all the cedar trees, thirty-two others had removed all the cedars but a few growing on their lawns, from which they have agreed to remove the cedar balls annually, and thirty-eight had not yet removed all the cedars. Of the 478 premises not visited the cedars have been removed from seventy-nine according to reports of the owners, and in twenty-three others the cedars have all been removed except those growing on the lawns. No doubt the cedars have been removed in whole or in part from many of the properties but the fact has not been reported.

FLAG SMUT.

The survey for Flag Smut completed prior to July 1, 1922, resulted in finding Flag Smut in sixty-six fields outside of the quarantined area of the previous year, making it necessary to extend the quarantined area about twelve miles in each direction. This extended area comprised about 700 square miles. The order of the department required that all wheat grown within certain described areas be either sold for milling purposes within the infested counties or else disinfected at threshing time, that all wheat straw be disposed of inside of the quarantined area, and that threshing machines remain inside of the quarantined area and be disinfected at the close of the season, all of which, owing to the fairly good cooperation of the farmers, grain men, and transportation companies, and the watchfulness of the inspectors were very satisfactorily carried out.

With an appropriation of \$6,000 made available late in May by the Fifty-third General Assembly a much more extensive survey was made in May and June, 1923, than any previous year. Only a sufficient number of fields in the generally infested area were examined to ascertain



whether there was an increase or decrease in the severity of the infestation as compared with conditions the previous year. The infestation was found to be heavier than last year. This was especially noticable in fields which farmers had sown to varieties which were not resistant. However, the loss on account of the disease generally speaking was light.

A somewhat intensive survey was made in a strip about twelve miles wide surrounding the infested area in the four infested counties last year, namely, Jersey, Madison, Monroe and St. Clair. In this strip thirteen infested fields were found in Jersey County one of which was in the quarantined area of last year, fifteen in Madison County, all of which however, were within the quarantined area of last year, five in Monroe County and two in St. Clair County.

During June an attempt was made to make a partial survey of every wheat growing county in the State. A total of 6,934 fields were examined. Flag Smut was found in two fields in Macoupin County. five fields in Greene, four fields in Scott, eight fields in Logan and one field in Hancock County. The accompanying map shows the extent of the survey, the approximate location of the infested fields and the counties under quarantine this year.

Surveys were made in parts of Missouri and Kansas by Federal inspectors assisted by State inspectors. As a result Flag Smut was found in five counties in Missouri and four in Kansas. The northern part of St. Louis County and St. Charles County, Missouri are generally and in places heavily infested. In the other infested counties in Missouri and in Kansas, the infestation seemed to be scattering but more extensive surveys in these states will no doubt result in finding it in other counties.

Since no effective measures were put in force in Missouri and Kansas to prevent the spread of the disease, it was useless for the Department of Agriculture to continue the somewhat drastic program of former years. The regulations this year related only to the handling of straw from the infested counties. The shipment of wheat straw to points outside the infested area was limited to shipments to paper mills and strawboard factories that guaranteed to use all the straw for the purpose of making paper, and to disinfect cars as soon as unloaded. This was designed to protect the uninfested counties of Illinois and other states in which the disease is not known to exist.

To promote the use of resistant varieties of wheat and the practice of disinfecting seed wheat the Department of Agriculture furnished to farmers selected by the county farm advisers in the four most generally infested counties, resistant varieties of wheat for planting, to increase the available supply of seed of these varieties. provided five tons of copper carbonate dust for disinfecting seed. and eight seed treating machines. The seed wheat supplied was as follows:

Fulcaster	.....200 bushels	Trumbull	.....200 bushels
Gladden	.....200 bushels	Shepherd	.....100 bushels

THE EUROPEAN CORN BORER.

The European Corn Borer has spread to two new counties in southern Maine, one new county (Wayne) in Michigan, six in New Hampshire, four in New York, three in Ohio (Grange, Huron and Wood), one in Pennsylvania and to four counties in Rhode Island. It was noticeably more abundant in the Ohio area than last year, though the damage throughout the Ohio area is still slight.

PROSECUTIONS.

Four complaints were filed during the year, one for violating the provision of the Flag Smut quarantine, two for refusing to allow their threshing machines to be disinfected and one against a transportation company for delivery of uncertified nursery stock without notifying the Department of Agriculture. The first complaint mentioned resulted in conviction and payment of fine of \$10. The others were dismissed on agreement of defendants to comply with regulations.

DIVISION OF PLANT INDUSTRY—SEED INSPECTION.

ALBERT C. WILSON, *Chief Seed Analyst.*

In making this report for the year ending June 30, 1923, I wish to explain what this branch of the Division of Plant Industry endeavors to accomplish.

The Seed Law provides for the labeling or tagging of certain farm seeds to show their purity, and if noxious weed seeds, as mentioned in the law are present in greater proportion than 1 to 5,000 of crop seeds, the names of such noxious weeds must be shown on the tag. This gives the purchaser of seed an opportunity to see the quality before he buys, thus the label or tag is his protection against poor quality seed.

The law provides for the taking of samples of seed by inspectors from shipments made by seed dealers and this affords an opportunity to determine whether seed is being properly tagged or not.

The laboratory is equipped to give service on purity of seed only, however, most State laboratories are equipped to make germination tests as well. The farmers are not exempt from the provisions of the Seed Law, therefore, the majority of the samples analyzed are for farmers and very often they request a germination test. The service rendered by the Seed Laboratory is of great value to the farmer because it gives him information regarding his seed which enables him to know whether it contains weed seed or not and, if so, the percentage of them present and in the case of noxious weeds, the proportion to crop seeds.

In addition to the analyses of seed, we have endeavored to render a greater service by recommending methods of keeping weeds out of seed, also, giving suggestions relative to proper cleaning. There is still much work to be done along this line.

Judging from letters received from time to time, also by words of appreciation expressed by farmers and others interested in this work, I feel that the services rendered are greatly appreciated.

There are many farmers in this State who do not fully appreciate the value of this Seed Law and the services which the laboratory can render, therefore, our educational program must be continued and enlarged to accomplish the best results.

The daily press, farm papers and seed trade publications are assisting in carrying out the publicity desired. As opportunity presents itself, addresses are made at farmers' club meetings, farmers' institutes, corn shows, and other important gatherings of farmers and seedsmen.

The Association of Official Seed Analysts of North America endeavors to keep all analysts interested in improving their methods of seed analyses. Much research work is done and the results are discussed at the annual meetings. Through a referee committee of this association,

samples of seed are submitted to each laboratory to be reported on. These reports are compiled and a comparison of all laboratories can be made. I am pleased to state that our reports on purity compare very favorably with the best equipped laboratories in the association. Owing to the fact that our Seed Law does not require a germination test this laboratory has not been equipped for this work, therefore, no comparison can be made with other laboratories and this places the work of our laboratory at a disadvantage. I feel sure that if we were doing germination testing, our work would be on a par with others.

The cooperation of farm advisers, seed dealers and the College of Agriculture during the past year has been of great value to us in our work, and I have endeavored on every occasion to reciprocate to the fullest extent. In attending the various meetings of all organizations interested in better seeds and improved agriculture, I have been able to get valuable information for use in connection with the work of this department.

Our exhibit material was made use of at Rock Island; Pageant of Progress, Chicago; Central States Fair and Exposition, Aurora; Grundy County Fair, Mazon; Lake County Fair, Libertyville; Kankakee Interstate Fair, Kankakee; Illinois State Fair, Springfield; Macoupin County Fair, Carlinville; Greene County Fair, Carrollton, and State Farmers' Institute Meeting at Belleville.

At each fair, bulletins were distributed, giving the Seed Law and Weed Laws of the State. A representative of this department accompanied the exhibit and answered questions regarding our work and explained the different items making up the exhibit. The exhibit attracted much attention and especially at the Pageant of Progress were many thousands of visitors who had an opportunity to learn of the work being done by the State in the interests of the farmers. At the county fairs the most interested visitors were farmers, and I believe all who saw the exhibit went away feeling amply repaid for the time spent in looking it over.

During the month of June, five new outfits were prepared for the use at county fairs in connection with the State educational exhibits. These outfits were prepared in such a manner to make the display of seed analysis as self-explanatory as possible. The Seed Law was illustrated in such a way as to bring out the principal points clearly and thus could be easily understood. The places at which these outfits were used, will appear in the next annual report.

A fairly good crop of clover and grass seed resulted in larger number of samples than last year. To carry on the work it was necessary to use all inspectors in the laboratory, consequently, the taking of samples from shipments by seed dealers was held up until the close of the season.

A total of 7,732 samples of seed, including inspectors' samples, were analyzed, of which 901 were found to be unsalable for seeding purposes under the law. A great many lots of seed represented by these samples were recleaned and the noxious weed seeds removed, thus making the seed salable. Some lots of seed represented by the unsalable samples were sold to dealers who had proper facilities for recleaning.

In cases where the percentage of weed seeds and inert matter was indicative of uncleaned seed, a recommendation was made to reclean and resample. If the recleaning of seed is not carefully done, it fails to remove all the noxious weed seeds, therefore, a suggestion regarding the cleaning is made, also that the noxious weeds be cut or pulled from the fields before harvest.

As in former years the greatest number of samples of seed came from farmers, and on account of their waiting until late in the fall and winter, it causes a considerable congestion of analysis work during January, February and March, but by extra effort and some overtime work, prompt service was rendered. It is hoped that the farmers will soon understand the necessity for sending in samples earlier and thus assist us in rendering our service more promptly.

The samples analyzed during the year consisted of the following number of each kind:

	Illinois.	Outside the State.	Total.
SALABLE.			
Red clover.....	4,034	3	4,037
Timothy.....	1,265	4	1,269
Sweet clover.....	456	4	460
Alsike.....	389	2	391
Mammoth clover.....	252	1	253
Mixture.....	248	5	253
Alfalfa.....	71	5	76
Millet.....	30	1	31
Red top.....	24	1	25
Sudan grass.....	11		11
Rape.....	8	1	9
Kentucky blue grass.....	7	1	8
Fescue.....	5		5
White clover.....	2		2
Bent.....	1		1
	6,803	28	6,831
UNSALABLE.			
Red clover.....	649	3	652
Timothy.....	90		90
Mixture.....	57	9	66
Mammoth clover.....	28		28
Alsike.....	26	1	27
Sweet clover.....	23	2	25
Alfalfa.....	7	1	8
Kentucky blue grass.....	2	1	3
Rape.....	1		1
Red top.....	1		1
	884	17	901

The following table shows the number of samples in which the noxious weeds as mentioned in the law were found:

	Illinois.	Outside the State.	Total.
Curled dock.....	2,999	31	3,030
Buckhorn.....	2,054	28	2,082
Field sorrel.....	657	27	684
Wild carrot.....	192	2	194
Dodder.....	91	3	94
Wild mustard.....	73	4	77
Ox-eye daisy.....	30	2	32
Canada thistle.....	16	15	31
Quack grass.....	1		1
	6,113	112	6,225

The following list gives the names of common weed seed found and the number of samples in which they appeared:

Green Foxtail	2,446	Eragrostis Grass	10
Broad Leaf Plantain.....	2,339	Spike Rush	9
Smartweed	1,308	Hemp Nettle	8
Yellow Foxtail	1,300	Flower of An Hour.....	8
Pepper Grass	1,140	Gumweed	7
Crab Grass	1,102	Velvetweed	8
Ragweed	938	Wild Sunflower	6
Bracted Plantain	894	Cress	5
Witch Grass	828	Marsh Elder	5
Cinquefoil	721	Cleavers	6
Prickly Lettuce	578	Bull Thistle	5
Pigweed or Amaranth	547	Wild Sage	4
Horse Nettle	542	Cow Cockle	4
Barnyard Grass	538	Wild Chickweed	4
Lambs Quarters	516	Sticktight	4
Spurge	493	Juncus	5
Spiny Sida	385	Yellow Trefoil	6
Vervain	155	Mother Wort	3
Sticky Cockle	136	Shepherds' Purse	4
Mayweed or Dog Fennel.....	121	Poverty Weed	3
Sedge	109	Morning Glory	3
Paspalum	100	Caraway	3
Rush Grass	94	Chicory	3
Three Seeded Mercury.....	87	Black Mustard	2
Wood Sorrel	61	Night Flowering Catchfly.....	4
Tumbling Mustard	62	Mountain Mint	2
Panicum	58	Buffalo Burr	2
Yarrow	57	Barnaby Thistle	2
Heal All	55	Corn Salad	2
Catnip	54	Basel Thyme	1
Russian Thistle	54	Buttercup	1
Wild Buckwheat	51	Bladder Champion	1
Knotweed	46	Goosefoot	1
Hare's Ear Mustard.....	39	Hedge Mustard	1
Wood Sage	34	Night Shade	1
Cheat or Chess.....	33	Roadside Thistle	1
Mallow	27	Venus' Looking-glass	1
Black Eyed Susan.....	24	Frenchweed	1
Evening Primrose	16	Spanish Nettle	1
Camomile	15	Dandelion	1
Dragon Head	15	Sand Burr	1
False Flax	13	Star Thistle	1
Knapweed	12	Sand Wort	1
Mouse Ear Mustard.....	11	Field Bindweed	1
Indian Mustard	11	Mullein	1
Nipplewort	11		

In the analysis of the samples received during the past year, it was found that 138 samples contained 5 to 10 per cent. twenty-two samples 10 to 15 per cent, ten samples 15 to 20 per cent. and seven samples over 20 per cent of weed seeds other than noxious. From these figures, it can be seen that many lots of seed were not cleaned very well and when we consider the inert matter, which as a rule should be blown out in the recleaning, it shows that 319 samples contained five to ten per cent. forty-eight samples ten to fifteen per cent, twelve samples fifteen to

twenty per cent and eleven samples over twenty per cent. It is very probable that many farmers do not have a fanning mill, but it is an essential implement in farming and where best results and highest prices are expected, the very cleanest seed should be furnished for seeding purposes, also for sale to other farmers. The operation of the Seed Law will in time eliminate the low quality seed so that only the best will be offered on the market.

WEED CONTROL.

The work of weed control was confined almost entirely to the Canada Thistle because our present law refers only to this pest. Meetings of Canada Thistle Commissioners were held in several counties and greater interest aroused in the work. Bulletins, colored posters and other material needed by the commissioners in carrying out their work was sent to them by mail.

The principal infestation of this weed is in the northern half of the State, where 534 Canada Thistle Commissioners have been appointed by the various boards of auditors, consisting of the supervisor, town clerk and justice of the peace. Some of these commissioners are very efficient while others are doing very little toward the eradication of these thistles. This lack of interest is brought out in the number who failed to make a report as required by the law. A total of 355 reports were received leaving 179 who did not report.

I fully believe that much good is being accomplished in the enforcing of this law, but it does not seem adequate to accomplish the entire eradication of this menace to agriculture.

From the experience I have gained in trying to stimulate greater interest in the operation of this Canada Thistle Law and by studying the laws of other states, I prepared a Noxious Weed Law which passed the Senate during the session of 1923, and was advanced to third reading in the House, but was smothered in the closing hours of the session. It is hoped that this bill will be passed at the next session in 1925.

The work done by this division has been in connection with seed inspection work, but on account of the increased demand in both lines it is necessary to drop some of the weed control work until funds can be provided to carry out the provisions of the Weed Laws of the State.

There seems to be a spreading of noxious weeds, therefore, the necessity for enforcing the laws is very apparent. The farmers are most benefited by the control of weeds because they can produce better yielding crops, therefore, they should do everything possible to keep weeds under control. The farm advisers of this State are exerting a very decided influence in the matter of weed control and their assistance in the past is greatly appreciated.

ANALYSIS FEES.

Under the Seed Law each individual, firm or corporation in the State is entitled to five free tests per year between July 1st and June 30th of the following year. This really means free service to the farmer or producer of seed because very few produce more than two or three different varieties of seed. Many local seed dealers in districts of seed production buy several different lots of seed and, therefore, require

service on more than five samples, consequently, a small sum is realized each year from this source.

During the past year the sum of \$306 was collected in this way and turned over to the State Treasury.

COMPLAINTS.

A few complaints were received regarding the sale of seed in certain localities without being tagged according to the law. These were investigated and it was found that the offenders were not wilful violators, but did not fully understand the law.

Some shipments from outside the State were found to be unsalable for seeding purposes, therefore, it was ordered returned. If purchase price had been paid, it was refunded.

Prosecutions have not been made because of lack of evidence in most cases, also because the offenders have proven that they were endeavoring to comply with the law.

Complaints were also received about Canada Thistles being neglected, also that owners of property would not cooperate with the Canada Thistle Commissioner. The individual cases were taken up with the local authorities and resulted in the work being taken care of and a better cooperation secured.

I have found that when some complainants are asked to produce evidence or take witness stand, they refuse, consequently, very little can be done except to endeavor through correspondence to have the matter settled in a satisfactory manner without court action.

RECOMMENDATIONS.

I would recommend that every effort possible be expended towards the passage of an adequate Weed Control Law and that sufficient funds be appropriated for the work.

I further recommend that a field inspection service be rendered to the producers of clover and grass seed with a view to weed control. Such a service in connection with the Illinois Crop Improvement Association will assist in the production of certified seed of known origin and adaptability to certain localities.

I recommend that the present Seed Law be amended or that the Uniform Seed Law, adapted to this State, be substituted and thus have a Seed Law in conformity with other State seed laws.

The services to be rendered by this branch of the Division of Plant Industry can be increased and made more valuable if appropriations are made adequate for the demands.

INSPECTORS' SAMPLES.

Owing to increased activities in other lines of the inspectors of the Division of Foods and Dairies, also on account of lack of funds, they could not give much time to the inspection and sampling of seeds, consequently, the number of samples taken by inspectors was confined to the two inspectors of this division, who were permitted to go out after the rush of analysis work was over.

The following table will show that more samples were taken from shipments of the Plant Seed Company of St. Louis, Missouri, than from

any other company, and this is due to the fact that we wished to determine the quality of seed they were shipping into this State.

The unsalable seed was returned to the shipper and all untagged seed was held until the analysis was furnished.

In the table the following noxious weeds, when present in samples, are shown by initials:

Canada Thistle	CT.	Buckhorn	B.
Quack Grass	QG.	Curled Dock	CD.
Dodder	D.	Field Sorrel	FS.
Wild Mustard	WM.	Ox-eye Daisy	OD.
Wild Carrot	WC.	Corn Cockle	CC.

INSPECTORS' SAMPLES.

Sample number.	Wholesaler and producer.	Address.	Retail dealer.	Address.	Kind.
H-107	Agricultural Seed Co.	St. Louis, Mo.	J. H. Smith & Co.	Jerseyville	Alsike
B-30	do.	do.	Alton Seed Co.	Alton	W. B. Sweet Clover
B-45	Crabb Reynolds Taylor Co.	Crawfordsville, Ind.	Ross Gresson	Greenup	Alfalfa
B-20	Farmers Produce Co.	Mt. Vernon, Ill.	Ralph Ruthford	Mt. Vernon, R. 9	Red Clover
B-21	do.	do.	D. E. Rose	Carmi	do
B-33	Kaercher Seed Co.	St. Louis, Mo.	Fritz Bros.	Staunton	Alsike
B-47	Dave Lutz	Marshall	C. A. Dixon	Marshall	Timothy
B-17	Edw. F. Mangelsdorf & Bro	St. Louis, Mo.	Belleville Co-Operative Grain Co.	Belleville	Red Clover (M Brand)
H-110	North American Seed Co.	Milwaukee, Wis.	Lloyd Hardware Co.	Pittsfield	Alsike
I-1	do.	do.	G. O. Stremmel	Manlius	Mixture, W. B. Sweet Clover
I-2	do.	do.	Dabler and Dabler	do	Alfalfa
I-3	do.	do.	M. F. Schmidt	do	Mamlius Clover
I-4	do.	do.	do.	do	Red Clover
B-13	Ohio Valley Seed Co.	Evansville, Ind.	C. L. Boyles	Albion	Timothy (Crown Brand)
B-22	Plant Seed Co.	St. Louis, Mo.	C. E. Castle	Fairfield	Alfalfa
B-23	do.	do.	do.	do	Sweet Clover
B-24	do.	do.	Janssen Seed & Floral Co.	Springfield	Timothy
B-25	do.	do.	A. W. Sicking	do.	Mixture Alsike
B-26	do.	do.	Springfield Implement Co.	do.	do
B-27	do.	do.	Godfrey Elevator Co.	Godfrey	Alfalfa
B-28	do.	do.	do.	do.	Mixture Alsike
B-29	do.	do.	do.	do.	Sweet Clover
B-31	do.	do.	Runzie Commission Co.	Alton	Mixture Alsike
B-32	do.	do.	do.	do.	Dwarf Essex Rape
B-34	do.	do.	Walshville Farmers Grain Co.	Walshville	Mixture Alsike
B-38	do.	do.	Stauder & Hoehn	Witt	Timothy
B-39	do.	do.	C. H. Kerr & Co.	Nokomis	Sweet Clover
B-41	do.	do.	Johnson Hicks Milling Co.	Altamont	Alsike
B-42	do.	do.	do.	do.	Sweet Clover
B-43	do.	do.	do.	do.	Rape
B-44	do.	do.	Ross Gresson	Greenup	Alfalfa
B-46	do.	do.	M. M. James	do.	Mixture
H-101	do.	do.	Will Mary Farm & Seed Co.	Roodhouse	Red Clover
H-102	do.	do.	do.	do.	Timothy
H-103	do.	do.	do.	do.	Red Clover
H-104	do.	do.	do.	do.	Sweet Clover
H-105	do.	do.	do.	do.	Mixture Alsike
H-106	do.	do.	do.	do.	Alfalfa
H-108	do.	do.	Sitton Bros.	Pleasant Hill	Alsike
H-109	do.	do.	do.	do.	Red Clover
H-111	do.	do.	Noah C. Twist Elevator	Diverson	Kentucky Blue Grass
W-1	do.	do.	R. J. McWard & Co.	Taylorville	Mixture Alsike

INSPECTORS' SAMPLES—Concluded.

Sample number	Wholesale or producer.	Address.	Retail dealer.	Address.	Kind.
HH-2	Plant Seed Co.	St. Louis, Mo.	Newton Seed & Feed Co.	Newton	German Millet.
1	Jessie Pritchett	Harrisburg, R. R.	G. G. Mugge	Harrisburg	Red Clover Mixture
B-15	Chas. Prunty	St. Louis, Mo.	Pioneer Poultry Supply Co.	East St. Louis	White Clover
B-16	do.	do.	do.	do.	Kentucky Blue Grass, No. 602.
H-100	Schisler-Corneli	do.	A. F. Weis & Son	Carlinville	Alsike.
B-36	Shubert & Turnbul	Irving	Cook & Giberson	Irving	Red Clover
B-37	Stauder & Hoehn	Witt	Farmer	do.	Red Clover
B-10	Geo. Couch & Son	West Salem	Not given	do.	do.
L-5	H. W. Dysart & Son	Franklin Grove	Not given	do.	Timothy
2	Geo. Huffman	Harrisburg	Farmer	Harrisburg, R. R.	Red Clover
B-48	W. M. Laughlin & Son	Mattoon, 1813 Broadway	Not given	do.	Millet.
B-49	do.	do.	Not given	do.	Red Clover
B-11	G. G. Mugge	Harrisburg	Not given	do.	do.
B-14	Newton Seed & Feed Co.	Newton	Not given	do.	Timothy, Lot 11
HH-1	A. S. Paddock	Sumner	Not given	do.	Timothy
B-35	Ware Bros.	Hillsboro	Farmer	do.	Alsike

INSPECTORS' SAMPLES—Continued.

Sample number.	Pure seed.	Dealers analysis.			Official analysis.			Remarks.
		Noxious weeds.	Per cent weed seed.	Per cent inert matter.	Noxious weeds.	Per cent weed seed.	Per cent inert matter.	
H-107	-----	BH., FS.	-----	1.	CT., WM., BH., CD., FS.	1.	1.	Unsalable.
B-30	-----	-----	-----	1.	-----	.84	.91	Unsalable.
B-45	-----	-----	.04	.17	-----	.2	.6	-----
B-20	-----	Not given	-----	-----	D., BH., CD.	1.8	8.	Unsalable.
B-21	-----	Not given	-----	-----	D.	.6	4.6	Unsalable.
B-33	95.00	D., FS.	-----	-----	FS., CD.	-----	.5	Unsalable.
B-47	-----	Not given	-----	-----	FS.	-----	-----	-----
B-17	-----	-----	.51	.28	CD.	.6	.8	-----
H110	98.00	No tag	-----	-----	FS., CD., CT.	1.2	.6	-----
I-1	99.00	-----	.6	.4	BH., FS., WM., CD.	1.6	.96	-----
I-2	99.62	-----	.28	.1	BH., FS., BH., CD.	.19	.98	-----
I-3	99.00	-----	.6	.4	D., WC., CT., FS., BH.	-----	-----	-----
I-4	99.00	-----	.75	.25	CD.	.93	1.1	Unsalable.
B-13	-----	Not given	-----	-----	CD., FS., BH.	.98	.98	Unsalable.
B-22	-----	-----	-----	.16	FS., OD.	.2	.5	-----
B-23	-----	-----	.26	.36	-----	.4	.2	-----
B-24	-----	-----	.07	.27	CT., BH., FS., CD.	.47	.96	-----
B-25	-----	-----	.73	.87	CT., FS., BH., CD.	.5	1.75	Unsalable.
B-26	-----	FS.	.73	.87	FS., CT., BH., CD.	.41	1.3	Unsalable.
B-27	-----	-----	.31	.11	D., BH., CD.	.25	.06	-----
B-28	-----	FS.	.73	.78	CT., FS., BH., CD.	.5	.75	-----
B-29	-----	BH.	.4	.6	CT., BH., FS., CD.	1.14	.25	-----
B-31	96.00	FS.	.73	-----	CT., BH., FS., CD.	1.	.75	Unsalable.
B-32	-----	-----	.10	.39	-----	-----	.22	-----
B-34	-----	FS.	.73	.87	CT., BH., FS., CD.	.75	1.	-----
B-38	-----	-----	.18	.32	BH., FS., CD.	.5	.5	-----
B-39	-----	lost	-----	-----	CT., BH., FS., CD.	1.7	1.4	Unsalable.
B-41	-----	Analysis	.42	.62	FS., CD.	.5	.1	-----
B-42	-----	BH.	.4	.6	CT., BH., FS.	1.	1.4	-----
B-43	-----	Not given	-----	-----	-----	.2	.6	-----
B-44	-----	-----	.41	.26	CD., BH.	.2	.6	Unsalable.
B-46	-----	Not given	-----	-----	CT., FS., CD., BH., OD.	1.	4.	Unsalable.
H-101	-----	BH.	.99	.26	CD., BH.	1.02	.5	Unsalable.
H-102	-----	-----	.07	.27	-----	.03	.39	-----
H-103	-----	-----	.12	.62	CD., BH.	.08	.70	-----
H-104	-----	-----	.30	.31	CD., BH.	.4	.4	-----
H-105	-----	FS.	.73	.87	CT., FS.	.10	.87	Unsalable.
H-106	-----	CD.	.57	.14	CD., WM., BH.	.33	.20	-----

INSPECTORS' SAMPLES—Concluded.

Sample number.	Pure seed.	Dealers' analysis.			Official analysis.			Remarks.
		Noxious weeds.	Per cent weed seed.	Per cent inert matter.	Noxious weeds.	Per cent weed seed.	Per cent inert matter.	
H-108	-----	FS.	.73	.87	CT., CD., FS., BH.	.4	1.	Unsalable.
H-109	-----	BH.	.75	1.01	BH., WC., CD.	.4	.4	Unsalable.
H-111	-----	-----	.91	.69	FS., CD., BH.	-----	3.	Unsalable.
W-1	-----	FS.	.73	.87	CT., FS., CD.	.47	1.4	Unsalable.
HH-2	-----	-----	.42	.30	-----	.77	.19	-----
1	-----	Not given	-----	-----	BH., CD.	.1	3.6	Unsalable.
B-15	-----	Not given	-----	-----	WM., FS., CD.	.5	2.	-----
B-16	-----	Not given	-----	-----	BH., FS., CD.	-----	10.	-----
H-100	-----	Not given	.35	1.3	BH., CD., FS.	1.	.5	-----
B-36	-----	Not given	-----	-----	D., BH.	.5	4.2	-----
B-37	-----	Not given	-----	-----	BH., CD.	.4	1.2	Unsalable.
B-10	-----	Not given	-----	-----	BH., CD.	.4	1.2	-----
L-5	-----	Not given	-----	-----	-----	2.5	.05	-----
2	-----	Not given	-----	-----	BH., CD.	.4	10.	Unsalable.
B-48	-----	Not given	-----	-----	-----	5.4	.3	-----
B-49	-----	Not given	-----	-----	BH.	1.54	1.45	Unsalable.
B-11	-----	Not given	-----	-----	D., BH.	.4	1.8	Unsalable.
B-14	-----	Not given	-----	-----	BH., FS.	.2	.5	-----
HH-1	-----	Not given	-----	-----	FS.	-----	.5	Unsalable.
B-35	-----	Not given	-----	-----	CD.	-----	7.5	Unsalable.

DIVISION OF STATE FAIR.

W. W. LINDLEY, *General Manager.*

In submitting a brief statement of the activities of the Illinois State Fair for the year 1923, we have to report that during the year the special appropriation for repairs to roofs and buildings amounting to fifty thousand (\$50,000) dollars was entirely expended.

This expenditure placed the buildings in excellent condition as to roofing and painting. The work was done under the direct supervision of the State Architect and improved the appearance of the buildings and the Fair Grounds. I believe the buildings are in better condition than they have been for the past fifteen years.

Inasmuch as the newly acquired land has not been properly connected with the old grounds, I would recommend that the entire grounds be fenced, so as to make one large enclosure. In doing this we could admit all automobiles into the Fair Grounds, control the parking of same and receive an admission fee sufficient to properly protect cars while parked.

In regard to the operation of the 1923 State Fair I would say that taking the various classes of exhibits into consideration, I believe it was as complete as any fair in its history. All of the classes were filled and all of the spaces and stalls occupied. The only thing that occurred to mar the absolute success of the fair was the declaring off of all harness races, which was due to the fact that there were five rainy days out of nine. Naturally the attendance would fall off on account of this weather.

Our attendance was 241,635 as against 251,280 during 1922, in which period there were but two rainy days. We class an attendance of 300,000 a normal attendance.

For your further information I attach statement of credits and debits of operation for 1923. This statement segregates the receipts and expenditures of the various classes that go to make up the operation of the Illinois State Fair.

ILLINOIS STATE FAIR OPERATIONS—1923.

Sections.	Debits.	Received from.	Credits.
Class A 1—Beef cattle.....	\$16,205.31	Stall fees.....	\$1,239.00
Class A 2—Dairy cattle.....	9,621.83	Stall fees.....	1,046.00
Class B 1—Heavy horses.....	8,637.02	Stall fees.....	612.00
Class B 2—Light horses.....	13,758.74	Stall and entry fees and night show	4,866.25
Class B 3—Jacks and mules.....	2,690.00	Stall fees.....	251.00
Class B 4—Speed.....	9,711.14	Entry fees, etc.....	1,661.00
Class C—Sheep and goats.....	6,327.86	Pen fees.....	401.00
Class D—Swine.....	8,481.08	Pen fees.....	900.50
Class E—Poultry and Rabbits.....	3,600.09	Pen and coop fees.....	953.50
Class F—Mechanic Art.....	40.00	Space rental.....	2,130.80
Class G—Farm products.....	5,890.00	.....	.....
Class H—Horticulture.....	1,576.00	.....	.....
Class I—Floriculture.....	2,811.95	.....	.....
Class J—Relics.....	1,247.50	.....	.....
Class K—Textiles and art.....	2,248.30	.....	.....
Class L—Education.....	1,215.00	.....	.....
Class M—Machinery and autos.....	552.79	Space rental.....	2,786.20
Class N—Dairy products.....	1,597.43	Space rental.....	40.00
Class O 1—Apiary.....	505.00	.....	.....
Class O 2—Culinary.....	1,549.70	.....	.....
Advertising.....	11,102.12	.....	50.00
Attractions.....	7,928.94	.....	.....
Boys' school.....	909.90	.....	.....
Boys and girls' clubs.....	3,369.47	.....	.....
Better babies conference.....	1,007.09	.....	.....
Concessions.....	2,345.15	Shows and concessions.....	21,312.03
Domestic science school.....	928.52	.....	.....
Emergency hospital.....	203.18	.....	.....
Extra clerk hire.....	975.50	.....	.....
Gates.....	2,262.67	Admissions to grounds.....	56,098.57
Grand stand.....	715.73	Admissions to grand stand.....	8,004.62
Members restaurant.....	987.17	.....	.....
Music.....	5,530.50	.....	.....
Office expense.....	2,874.81	.....	.....
Operations, general.....	28,500.63	.....	.....
Police.....	5,063.46	.....	.....
Repairs and maintenance.....	35,740.83	.....	37.85
Rents.....	.....	Storage and rents.....	446.20
Salaries (office help).....	8,675.00	.....	.....
Travel.....	1,781.53	.....	.....
Tickets and admissions.....	1,871.00	.....	.....
		State fair receipts.....	\$102,836.52
		Deficit account 1923 State fair..	119,123.42
Total paid from State appr.....	\$221,959.94	.....	\$221,959.94

NOTE.—Purchase of land \$98,000.00 and enhanced value reroofing buildings \$50,000.00 not included in above.

DIVISION OF POULTRY HUSBANDRY.

C. P. SCOTT, *Chief Poultryman.*

There were 96 pens at Quincy, Illinois Contest and 52 at Murphysboro, each pen consisting of 5 birds. Twenty states were represented, but the majority were from Illinois and competition for the greatest possible record was keen.

The high pen was 1,074 eggs in 365 days. The high individual was 306 eggs. There were 32 birds that laid 200 eggs, 61 birds laid between 175 and 200, 91 birds laid between 150 and 175 eggs. The best laying record was 56 eggs in 56 days. The grand average per bird exceeded 125 eggs.

In conducting these two contests our object has been to stimulate and encourage the poultry raisers of Illinois to breed better poultry, give better care and make better profit. The records made each month are tabulated and sent to each contestant and a careful analysis of the figures made, bird by bird, month by month.

It will be seen that while there were many record birds and one world champion produced, there were also many poor layers, which were responsible for the average number of eggs per hen for the year not being larger. In our contest work we have emphasized the importance of breeding for egg production, as good care and feed will obtain from a hen only that which may be in her, and good breeding is as important as good care and feed. They must go hand in hand.

Two thousand feet of moving picture films were made during the year 1923, which shows the actual work as carried on daily at the two contests.

It is conceded that eggs are the best quality of food. In these days of low price of grain and livestock, which are abundantly produced on the Illinois farms and are being sold below production cost, it behooves every farm owner to make the best of his circumstances.

Our contest work is stimulating greater interest. Our bulletins are in great demand and over 20,000 were distributed during 1923.

Our contest work during the past year has been to acquaint the poultrymen and women with the character of pure bred fowls that will pay honest returns for the work and feed given them.

RECEIPTS.

From July 1, 1922 to July 1, 1923.

Entry fees	\$1,480.00
Sale of eggs.....	1,705.61

DIVISION OF AGRICULTURAL STATISTICS.

A. J. SURRATT, *Agricultural Statistician.*

In 1919 the Illinois Department of Agriculture and the United States Department of Agriculture, with a view to economy as well as to strengthen their crop and livestock reporting organizations, entered into a cooperative agreement to issue their reports and bear the expense of operation jointly. This partnership project is more familiarly known as the Illinois Cooperative Crop Reporting Service, under which heading all reports are issued. The work is carried on under the direct supervision of a federal statistician. In addition, all regular state reports issued each month are reviewed by the U. S. Crop Reporting Board before released for publication. These reports represent the result of extensive investigations of the combined State and federal departments of agriculture, also of considerable travel, observation and interview with leading agricultural authorities in Illinois by the statistician in charge. The entire project has measured up to all expectations and delivered an increased and efficient service annually up to July 1, 1923, when the last session of the Legislature, in one of its last week rushes, and with little or no consideration of our past service or the statistical needs of one of the greatest agricultural states, failed to provide for the continuation of formal cooperation. During the four years of cooperation the work has proceeded under cordial relations and support of both departments.

The demand for the regular monthly and special reports, also direct requests for special agricultural information pertaining to Illinois, continues to show a steady annual gain. In fact, this demand has long passed the stage where it can be adequately met with the present office facilities. The Illinois Crop and Livestock reports now have a wide and increasing circulation among farmers, newspapers, farm papers, farm organizations, educational institutions and business firms, not only in Illinois but in neighboring states. In fact, the Illinois reports are now going to practically every state in the Union.

The scope of the work carried on by this division involves field investigations; summarizing and interpreting all regular and special livestock, crop and price reports taken from reporters' schedules often containing from forty to fifty separate questions; submitting state estimates, also semi-monthly reports to the United States Crop Reporting Board; reviewing, preparing for printing and issuing the special and regular reports to crop reporters, the press and general mailing list in the form of two separate printed publications each month, namely, the advance sheet for the State and the full pamphlet report showing the county crop and livestock reports for Illinois and for the

nation as a whole. Large lists of reporters must also be maintained on both addressograph plates and cards. These various lists of regular reporters number over two thousand and are well distributed through all counties of this State. There are also over three thousand names on special acreage survey and other lists. Complete files are kept by counties of correspondence, regular reports and special data collected, also a reference library of publications.

In addition to the work mentioned heretofore, this division must also handle a vast volume of work in the way of compiling agricultural data collected annually by township assessors.

There is a large volume of difficult correspondence to handle requiring the preparation of statistical tables covering a wide variety of agricultural data desired by crop reporters, the press, business firms and others. About ninety thousand pieces of mail are sent out annually, divided roughly as follows: seventy-two thousand regular crop and livestock reports (printed or mimeographed), and eighteen thousand direct crop and livestock inquiries to reporters, form letters and official correspondence.

Farmers and farm organizations are studying and using the reports of this service more than ever before and have come to look to our reports as the authority on State crop and livestock estimates. Their confidence should be maintained and encouraged. Reliable crop and livestock reports are essential to the efficient and economical conduct of the business of agriculture, in fact, the very foundation of any intelligent agricultural marketing program.

File copies of our monthly, semi-monthly and other reports showing service rendered are on file in both the office of the Director of Illinois Department of Agriculture at the State House, and in the office of the Illinois Agricultural Statistician, U. S. Department of Agriculture, Room 17, Post Office Building, Springfield, Illinois.

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